



**THREE CRISES: MANAGEMENT IN THE
COLONIAL JAVA SUGAR INDUSTRY
1880s - 1930s**

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ABSTRACT

Three Crises: Management in the colonial Java sugar industry, 1880s-1930s

From the late nineteenth century until the mid-1930s the Java cane sugar industry was a major global sugar producer, an irreplaceable part of the local economy, and an integral element of Dutch colonialism. During what can be called its modern company period it was transformed into a highly industrialised and 'scientised' twentieth century business organisation exporting into world markets.

Using a variety of sources, largely from archives in Indonesia and the Netherlands, this thesis fills in some of the details of its management in this largely unexplored period and questions some of the conventional assumptions about changes in that management in particular and some Chandlerian assertions about changes in management of large-scale industries more generally.

A central claim is that management in the industry was a historical phenomenon and, as such, subject to dynamic processes of change. In relation to its structure and personnel, there were three main periods of transition. These involved management responses; first to the commercial and technical crisis which struck the Java sugar industry in the mid-1880s, then to the economic and political challenges stemming from the First World War, and finally to the regulatory surgery imposed by the government on the industry during the 1930s.

The study describes changes in relations between ownership and management; in management structures and relations; and in sources, training, conditions and promotional patterns of management personnel. The dynamics of various levels of management are examined, as are their changing relations with the colonial state and other potential societal and industrial pressures.

It is argued that the evolution of the organisation and personnel of management of the Java sugar industry, locally strong but internationally weak, was part of the business of the peculiarly Dutch late colonial system. The great majority of its European management were Indo-Europeans and, in a dual colonial labour market, a majority were recruited locally. It was also influenced by being an integrated agro-industry of factories processing cane from a shifting, rented, patchwork resulting from limited agricultural land and protective Native land rights.

It is also argued that the industry followed Chandlerian principles in several important ways but differed from them in significant others, particularly in relation to family rather than professional management and ownership, internal competition and external marketing.

DECLARATION

This thesis contains no material which has been accepted for the award of any other degree or diploma in any university and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference is made in the text.

I give consent to this copy of my thesis, when deposited in the University Library, being available for loan and photocopying.

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SOME NOTES ON LANGUAGE USED

The ethnic labelling of the period had been retained to avoid distorting the colonial cultural assumptions inherent in it. Thus people are referred to, as they normally and normatively were by Dutch management at the time, as "Native", "European" and "Chinese". (In some situations when an ethnic differentiation between "Natives" was wanted labels such as "Javanese", "Sundanese", "Madurese" or "Ambonese" would be used. The present term "Indonesian" was used deliberately by some from before 1920 and more so as the National Movement was evolved. However, the deliberate political intentions in this were not reflected in the language use of the management of the sugar industry or of government during the whole period considered.)

In the areas of Java with the sugar plantations the "Natives" were mostly Javanese, with Sundanese in the extreme west near Cirebon, and Madurese in the extreme east, the so-called East Hook. The "Europeans" were a mixture of people with some European (mainly Dutch) descent. Over this period a majority were Indies-born with an increasing minority European-born (totoks) and other smaller minorities of other descent who had been given legal European status. The "Chinese" were similarly a mixture of people with some Chinese descent, also increasing in numbers China-born. There were some organised differences between Chinese from different areas and languages of China and between the overseas-born (totoks) and those with some local descent (peranakans). The other ethnic category sometimes used officially, "Other Foreign Easterners", might include the Chinese but usually referred mainly to Arabs or people from British-India.

Unless a name, published title or similar is being quoted the Dutch spelling of the period is translated into present forms: *oe* becomes *u*; *tj* becomes *ch* (or *c* if in Indonesian); *dj* becomes *j*; *ij* or *j* becomes *y*.

Unless in a direct quotation or published title the present version of a place name is used: *Surabaya* is *Soerabaija*, *Soerabaja* or *Soerabaia*; *Cirebon* is *Cheribon* or *Tjeribon*; *Bogor* is *Buitenzorg*; *Jakarta* is *Batavia*; *Yogyakarta* is *Djokjakarta* or *Djokja* or *Djocja*.

Except where otherwise noted all translations from Dutch or Indonesian are mine.

ABBREVIATIONS USED

Archief (Archief voor de Java Suikerindustrie [1893-1909]/ Archief voor de Suikerindustrie in Ned.-Indië [1909-1934]/ Archief voor de Suikerindustrie in Nederland en Ned.-Indië [1940-41/2]) = Archive for the Java Sugar Industry/... for the Sugar Industry in the Netherlands Indies/... for the Sugar Industry in the Netherlands and the Netherlands Indies

ARD (Algemeen RechercheDienst) = General Detective Service

BENISO (Bond van Eigenaars van Ned.-Indische Suiker Ondernemingen) = Union of Owners of Sugar Businesses in the Netherlands Indies, or Netherlands Indies Sugar Estate Owners Union

f. = florin, another name for the Dutch and Indies currency unit, the guilder

HBS (Hogere Burgerschool) = High School (5-year)

HVA (Handelsvereniging "Amsterdam") = Amsterdam Trading Society

IEV (Indo-Europeesch Verbond) = Indo-European Union

Internatio (Internationale Crediet- en Handels-Vereeniging "Rotterdam") = Rotterdam International Credit and Trading Company

IOB (Indisch Ondernemersbond) = Indies Business Union

Ir. (Ingenieur) = Engineer (Graduate)

ISDP (Indische Sociale Democratische Partij) = Indies Social Democratic Party

ISDV (Indies Sociale Democratische Vereeniging) = Indies Social Democratic Association

JCM (Java Cultuur Maatschappij) = Java Plantation Company

Jhr. (Jonkheer) = "title of lesser nobility"

JSV (Java Suiker-Vereeniging) = Java Sugar Association

JSWB (Java Suiker Werkgevers Bond) = Java Sugar Employers Union

KPM (Koninklijke Paketvaart Maatschappij) = Royal Mail Shipping Company

Mij (Maatschappij) = Company

Mr. (Meester) = (as a title, graduate lawyer)

MVO (Memorie van Overgave) = Handover or Transfer Report

NHM (Nederlandsche Handel-Maatschappij) = Netherlands Trading Society

NI/NOI (Nederlandsch-Indië/Oost-Indië) = Dutch or Netherlands Indies/East Indies

NIHB (Ned.-Indische Handelsbank) = Netherlands-Indies Trading Bank

NILM (Ned.-Indische Landbouw Maatschappij)
= Netherlands-Indies Agricultural Company

NV (Naamlooze Vennootschap) = Company Limited

ONRANI (Ondernemersraad voor de Ned.-Indië) = Netherlands-Indies Business Council

PEB (Politiek Economische Bond) = Political Economic Union

PFB (Personeel Fabrieks Bond) = Factory Workers Union

POJ (Proefstation voor de Oost Java-suikerindustrie)
= Research Station for the (East) Java Sugar Industry

SDAP (Sociale Democratische Arbeiders Partij) = Social Democratic Labour Party

SI (Sarekat Islam) = Islamic Union

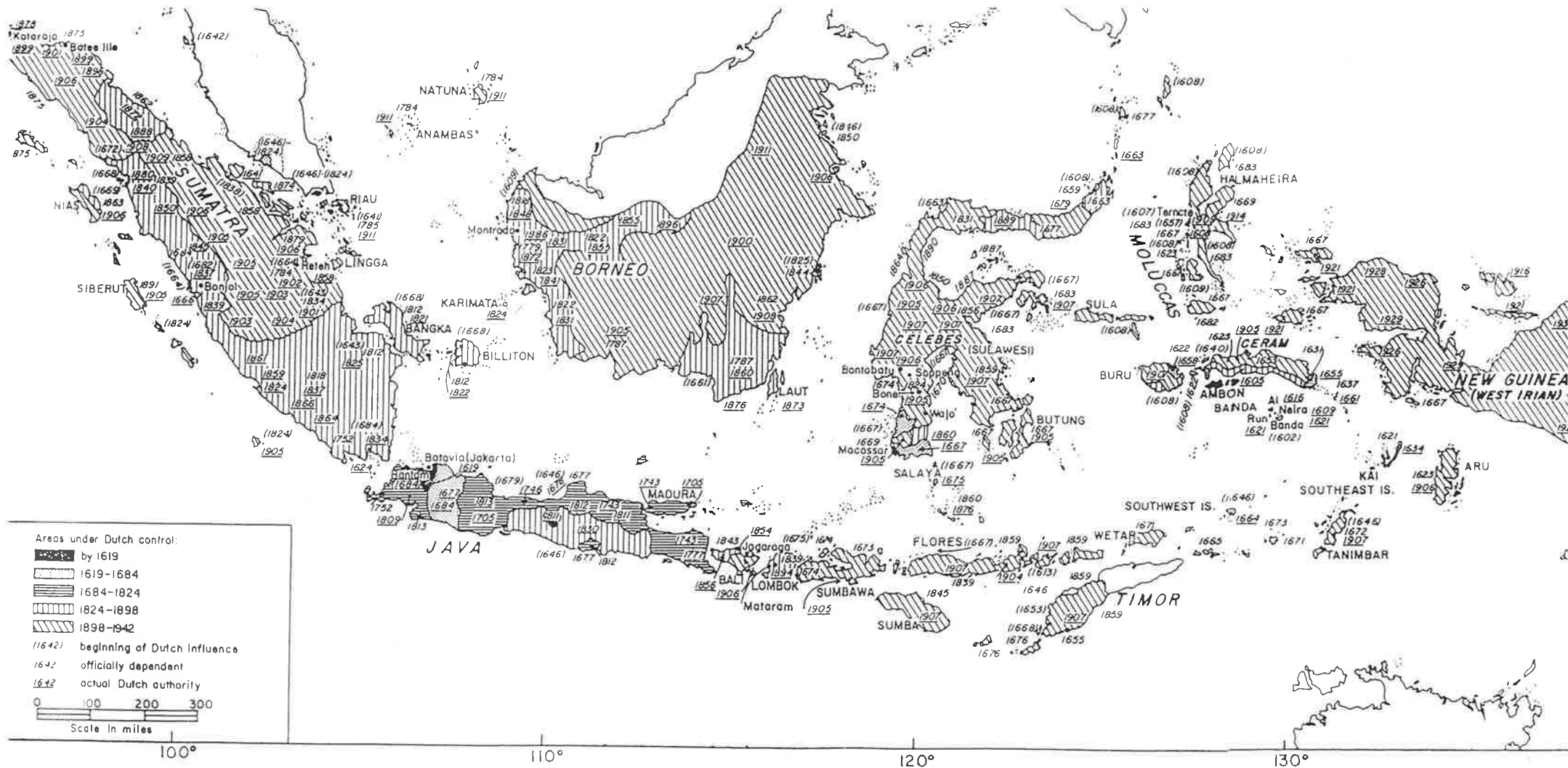
Suikerbond (Bond van Geëmployeerden bij de Suikerindustrie op Java en Madoera)
= Sugar Employees Union (of Java and Madura)

Syndicate (Algemeen Syndicaat van Suikerfabrikanten in Ned.-Indië) =
General Syndicate of Sugar Manufacturers in the Netherlands Indies

VC (Vaderlandsche Club) = Fatherland Club

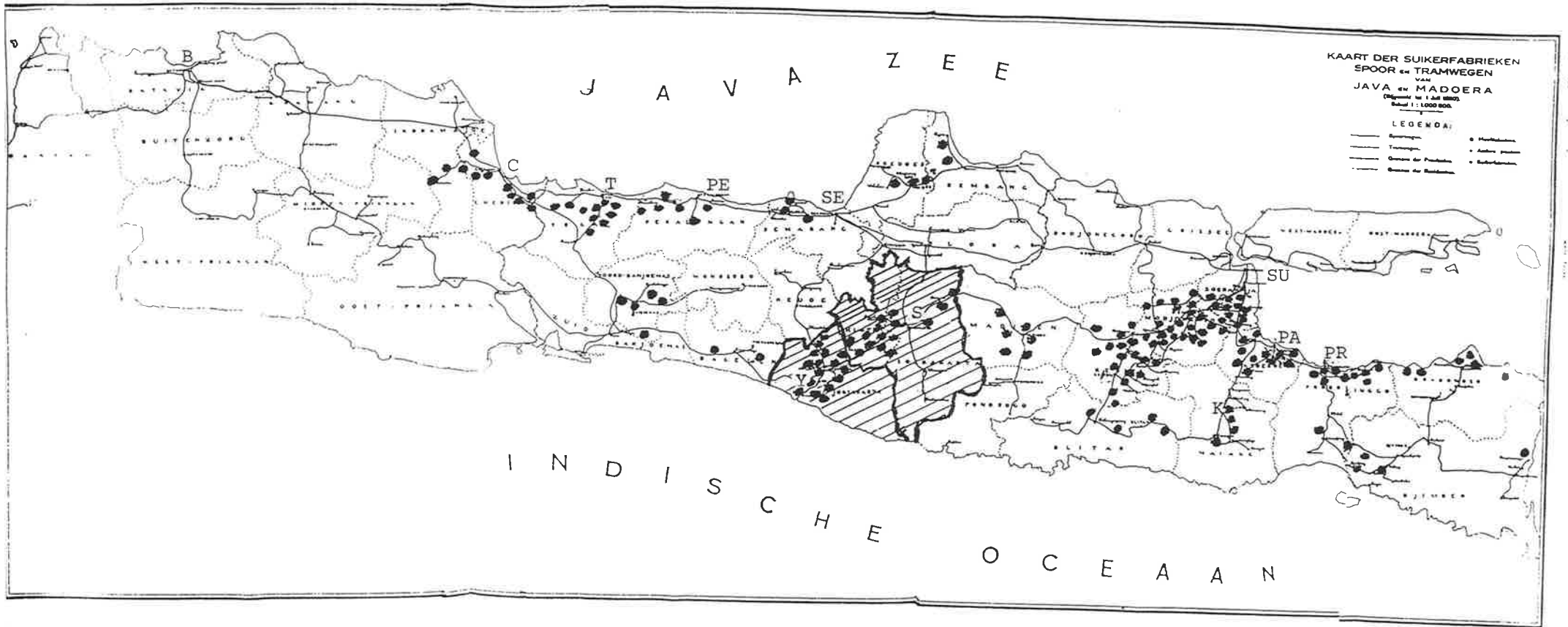
VISOCO (Vereeniging van Javasuikerondernemers ter Quotering der Uitvoren bij
Internationaal Contract)
= Association of Java Sugar Companies for setting International Contract Export
Quotas

VJSP (Vereeniging van Java-Suiker Producenten) = Java Sugar Producers Association



Map 1 The Dutch East Indies, showing the expansion of Dutch authority.

(From Soedjatmoko et al (ed) *An Introduction to Indonesian Historiography*, 1965: between pp358-9)



Map 2 Sugar factories on Java 1930

(The Principalities are shaded. B = Batavia; C = Cirebon; T = Tegal; PE = Pekalongan; SE = Semarang; SU = Surabaya; PA = Pasuruan; PR = Probolinggo; MA = Malang; K = Kediri; S = Solo/Surakarta; Y = Yogyakarta)

(Fold out in back cover of *Algemeen Syndicaat van Suikerfabrikanten in Nederlandsch-Indië Personalia en Verdere Gegevens betreffende de Suikerindustrie in Ned.-Indië. Jaargang 1930-'31.* V H van Ingen: Soerabaja)

Chapter 1 MANAGEMENT WITHIN THE JAVA SUGAR INDUSTRY

A. INTRODUCTION

New industrial and agricultural technologies began to be introduced into the tropical cane sugar industry in the late nineteenth century and led to massive increases in sugar production. The evolving role of management was crucial to the profitable use of these technologies. Managers in sugar factories, in companies set up to own the factories, and in industry-wide collective organisations all helped transform tropical cane sugar industries into highly industrialised and "scientised" twentieth century business organisations exporting into world markets. To understand how management did this means that the word "management" must be understood as a potentially useful analytic tool. It includes both particular people and the functions they carry out. Management is what these people are and what they do, it is both personnel and process. In organisations, management means identified people exercising discretionary authority over others based on their designated positions in the organisations. To make decisions, management assumes authority to control other people and has expectations about the extent of that authority. Because the sugar industry is an international commodity industry, its management decision-making includes authority over local production and expectations about international consumption of the product.

Recently, historian Alan Dye (1998) has analysed the influence of management and technology on the development and structure of the cane sugar industry in Cuba, the world's largest by the early decades of the twentieth century!¹ There has been no comparable examination of the industry in Java, the second largest. At the end of the 1920s, the industry's greatest extent, it was producing nearly an eighth of the world's total sugar, employing about ninety thousand permanent workers and another million temporary workers at the heights of the planting and milling season. Nearly two

¹ In his *Cuban Sugar in the Age of Mass Production* (1998).

hundred factories and their plantations were spread across more than two and a half million hectares of mostly irrigated land.² The industry operated as a major element of the Dutch colonial system of ethnicised politics and economics. Its management situation was unique. From the late nineteenth century, production activities in fields and factories were controlled in a tight vertical integration of growing, harvesting and processing. The factories were privately owned, mostly by Europeans. Factories were held permanently while the fields, worked with Native labour, could only be rented. Moreover, after each cane harvest the fields had to be restored and returned to their Native owners. Unlike the various Caribbean, Hawaiian, United States or South American sugar industries the Java industry had neither used slaves nor imported foreign labour.

From the late nineteenth century until the 1930s the Java sugar industry was a significant global sugar producer, an irreplaceable part of the local economy, and an integral element of Dutch colonialism. Given the importance of management within the industry and the trends in business history associated with the work of Alfred Chandler, it is surprising that so little historical attention had been given to its organisation and personnel. Likewise, issues related to the role of business culture in management, neglected by Chandler but emphasised by his critics, have been almost entirely unexamined. In turn, this reflects the generally embryonic state of the study of business structures and of the people who manned them in late colonial Netherlands Indies.

The relative absence of investigation has allowed wide acceptance of a simple trans-historical image of the management of the Java sugar industry. Insofar as management has been given a history from the 1880s to the end of the 1930s, it has been presented in terms of a rapid transition from a traditional into a stable modern period. On this reading, family managements with semi-feudal owner-administrators were rapidly replaced by efficient, rational corporate managements which then

² Boomgard 1988: 157; *Archief voor de Suikerindustrie in Nederlandsch.-Indië* 1928: 293 (subsequently *Archief*).

continued in a more or less static form until the end of the Dutch colonial period. Further examination of the structure and role of management in the industry has been neglected over the recent decades by a research literature which has concentrated on the relations of the sugar factories to the local Native economy. In this work I critically analyse several accounts of management in the massively expanding Java sugar industry between the early 1880s and the late 1930s to rectify some of these omissions.

My central thesis is that the industry's management was a historical phenomenon and, as such, subject to dynamic processes of change. Change over time rendered the structures and personnel of the 1880s largely unrecognisable fifty years later. The factories were greatly developed in their technology and capacity to process sugar out of the cane which was grown on increasingly larger and more productive plantations. Consequently, sugar production increased nearly 8-fold from the mid-1880s to the late 1920s maxima.³ By 1930 there were 179 working factories, 39 having been opened and 55 closed over the previous 35 years.⁴ I argue that there were three main periods of transition in management structure and personnel. The first, fundamental but most gradual, was provoked by the commercial crisis which struck the Java sugar industry in the mid-1880s. The second, traumatic but largely self-solved, was precipitated by the economic and political challenges stemming from the First World War. The third, crucial but mostly neglected in the subsequent literature, covered responses to the government's regulatory surgery imposed on the industry during the economic crisis of the 1930s.

I shall articulate my analysis of these three periods of transition in the industry's managerial evolution by considering both the process of management and the people of management. In the first, I will examine the business and other organisational structure which empowered and constrained management personnel when responding to the

³ Prinsen Geerligs 1918: 129; Sugar Statistics 1932/3.

⁴ Figures collated from annual surveys and reports by the General Syndicate of Sugar Manufacturers from 1895 until 1931, eg. *Verslag van het Algemeen Syndicaat van Suikerfabrikanten in Ned.-Indië 1930/1931*: 189-190, Tabel 1a, 'Aantal werkende fabrieken in elke Residentie').

changing demands made on them. In the second, I will analyse the personnel themselves; their recruitment, training and conditions. These last were key issues in the business management culture and practices of the Java sugar industry in Dutch late colonialism.

B. A THUMBNAIL SKETCH OF THE COLONIAL JAVA SUGAR INDUSTRY⁵

At the end of the 1870s, the Java sugar industry, its previous formative stage drawing to a close, was optimistically expecting another period of gradual transition in its management.

There were then well over one hundred factories, in two main management categories, the Cultivation System factories and the Free factories. The former still had much of their agricultural operations managed by the government but the latter were managed completely privately. The larger category, founded from 1830 to the mid-1850s, had been set up with government loans and contracts under the Cultivation System (*Cultuurstelsel* or *Kultuurstelsel*) of coerced sugar production. These factories had processed cane grown on government-allocated land by government-organised local Native labour. The sugar had then been delivered at a very profitable contracted price to the government-appointed monopoly agent, the Netherlands Trading Society (*Nederlandsche Handel-Maatschappij, NHM*) for shipment and auction in Amsterdam. Land availability and cane growing had been managed by government officials (mainly Native), and sugar distribution and marketing by the NHM. Harvesting and processing of the cane into sugar, and delivery of the contracted sugar to the NHM warehouses were all managed by the owning or employed factory Administrators. Many contractors took advantage of a "free disposal" opportunity to gradually increase

⁵ For a more detailed account with supportive references see Appendix 1.

production beyond their government contracts, paying for the additional cane used. The surplus sugar could then be used to supply private contracts, which often became larger than the original governmental ones. The Cultivation System was of great and known benefit to those obtaining the basic contracts. It was not expanded after the mid-1850s, following the political liberalisation and more influential demands for economic liberalism in the Netherlands. However, the forced delivery System for producing exportable sugar was not replaced completely until the beginning of the 1890s.

Outside the Cultivation System a smaller number of so-called Free factories had been set up. In 1870 the ending of the System for export sugar production was foreshadowed by the Dutch government's Agrarian and Sugar Acts. These continued to prevent non-Natives *buying* currently Native-owned land for agricultural purposes, but legalized short-term *renting* of Native land by non-Natives. This provided a legal foundation for the wave of Free factories. Their managements rented land from Native owners and arranged the labour necessary for the planting and growing of cane as well as controlling its factory-processing and the subsequent sugar sales. In addition to these post-1870 factories, which were set up in the "government lands" directly controlled by the Dutch colonial government and including most of Java, there were also Free factories which had been established earlier in the Central Java Principalities (*Vorstenlanden*) of Yogyakarta and Surakarta/Solo. The traditional ruling houses of these Principalities had continued to be allowed some limited autonomy and, as these rights included those of appanage, land had been rented and sugar factories built there from the 1860s, well before similar arrangements were legalised across the "government lands".

The opening up of possibilities for a Free Enterprise system in the "government lands" in 1870 was a crucial element of the total plan to close down the Cultivation System, but this was not to be an immediate closure. The government

⁶ This term is used by Van Niel (1992: 149) in preference to "Liberal System", which label is also used.

made no more contracts to accept sugar but did make new twenty-year contracts to continue to supply cane to the existing Cultivation System factories. However, these stipulated that over the contract periods' final two thirds, the thirteen years from 1878, the quantities supplied would steadily be reduced to zero. Therefore, from the beginning of the 1880s there were continuing but decreasing differences between the management needed for the Free and Cultivation System factories. The Free factories were, as they always had, managing all their cane supply needs, from renting and preparing parcels of land to growing, harvesting and transporting of the cane they used. The managements of the Cultivation System majority were gradually setting up similar private plantation arrangements to replace those previously made for them under the aegis of the state. All factories were continuing to manage their own manufacturing processes and, by that time, their sales contracts.

The Cultivation System's "free disposal" arrangements had provided some opportunities and rewards for private capital to come into the industry. Opportunities were radically expanded after the 1870 opening up of the industry in the "government lands" to new Free factories, together with the abandoning of the previously monopolised selling arrangements for those in the Cultivation System. In the newly freed export market, the dominant destination rapidly changed from Amsterdam to London, the proportion shipped to the former dropping from ninety per cent in 1873 to about ten in 1880.⁷

The anticipated steady progress of the Java industry was suddenly checked. In the early 1880s the various management changes mentioned had been foreseen, there was a general optimism about the future export market, new financing institutions had been set up, new factories were being built and planned. But, after a gradual decline the international export price of sugar suddenly collapsed in 1884. Moreover, a major cane disease suddenly appeared and spread. These blows produced short-term financial starvation and longer-term pessimism for many owners. The conventional, but

⁷ Fasseur 1986: 137.

misleading, historical account of the industry is that survival of the consequent crisis involved a rapid and complete change in management.⁸ In that account the previous system, dominated by individual or family management, was totally converted into a corporate or modern company system, and individual private ownerships were quickly replaced by non-family companies under the control of a few major financing institutions (*cultuurbanken*).⁹ The newly corporatised control of the industry then produced a professionalisation of management. The new corporate owners founded industry-wide professional, lobbying, sales and industrial organisations, and the new system of management continued until the occupation of the Dutch East Indies by Japan in 1942.

After surmounting the problems of the mid-1880s the Java industry continued to expand. By the end of the 1890s management was modernising the technology and scale of its nearly two hundred factories at an increasing rate. During the first three decades of the twentieth century these developments continued, reaching the peak of a steadily profitable trajectory during the 1920s after a post-World War I profit spike. As with all export-oriented sugar producers, the Java industry was struck profoundly by the collapse of selling prices and selling opportunities of the Great Depression. By the mid-1930s most factories were closed, at least temporarily, reviving to about half the industry's previous size in the late-1930s. In the first harvest cycle of the Japanese Occupation, many of the factories continued under their European managements. These men were then interned. Some factories were operated under new Japanese management, but the majority were either converted to other purposes or dismantled. In the period after the Occupation and the subsequent Independence struggles the factories that had continued or been restored were joined by some new ones. Nevertheless, the post-colonial Java sugar industry supplied only the domestic market.

⁸ See the discussion in the next chapter.

⁹ Eg. Furnivall 1939: 197-9; Allen and Donnithorne 1957: 83; Van Niel 1981: 56 or 1992: 151; Fasseur 1986: 140. These refer briefly to unproblematic changes but do not attempt to further analyse them, use primary sources to examine them, or differentiate between the owners and companies involved.

Therefore, it had lost the economic importance it had previously when its local operating and tax expenditures had been paid from money brought in to the domestic economy from the proceeds of its massive export sales.

C. LITERATURE REVIEW

After Alfred Chandler's influential promotion of the relative importance of middle management in the evolution of large-scale industrial capitalism, an adequate historiography of the management in the Java sugar industry over this period must include a consideration of his theories. In *The Visible Hand: The Managerial Revolution in American Business* (1977) and *Scale and Scope: The Dynamics of Industrial Capitalism* (1990), Chandler asserts that a new stage of capitalism evolved in the urban, industrialised United States and Europe in the latter half of the nineteenth century. Made technologically possible by modern transportation, communication and continuous-process manufacturing, the management of many processes of production and distribution moved out of the hands of owners and was given to teams of salaried managers. Managements expanded the economies in scale and scope of their companies, taking over existing firms or setting up new businesses to provide forward distribution of their products and backward servicing of their own needs for goods and services. Thus they constructed multi-unit corporations, with increasing vertical and horizontal integrations of the flow of goods, finance and information through the administrative structures defining them. These integrations depended on middle and top management respectively. Chandler asserted, first about the United States then in his later work generally, that a competitive capitalist system makes this not only a possible but a necessary shift which must be made if large companies are to survive and expand in their constant struggles with competitors.

By giving such priority to the importance of the salaried managers with little or no equity in the firms themselves, Chandler shifted attention away from the

contribution to success made by their entrepreneurial owners. He used the term "managerial capitalism" to differentiate this new modern form from the earlier form of "personal capitalism" or "family capitalism". According to Chandler, the business culture of successful large companies emphasises professional skills rather than personal qualities or connections, with "professional management" having to replace "personal management". His writings promoted the study of the evolution of large modern industrial firms as dynamic organizations, with attention to the personnel and activities of their management, particularly their middle and senior management, crucial to adequate understanding of their growth, success or failure.¹⁰

However, Chandler's influential model has been challenged on theoretical and empirical grounds. Theoretical criticisms include claims that his dichotomies between "family" and "professional" and between "personal" or "proprietary capitalism" and "managerial capitalism" were false. Chandler's model neglects the ownership and management control variety displayed by "family firms", including the use of salaried managers by an owning, directorial management. It has also been suggested that further investigation of convergence between the categories of "family" and "managerial" firms, among other dynamics over time, is necessary before generalising conclusions about "management" can be justified!¹¹ Empirical critics have used different American data to disprove some of the claims he made about the technological basis of the evolution of American big business. Moreover, evidence from other than large corporations in America, Germany and Britain weakens Chandler's and his followers' assertions!² In one case, particularly relevant to the present study, data from the hundred largest pre-World War II Dutch companies was

¹⁰ Chandler 1990: 594-5.

¹¹ Church 1990.

¹² See the summary in John 1997, especially pages 180-193. For an earlier critical review see Supple 1991. Other writers have undercut its generalisations using different American data (eg. Zunz 1990). The special "Family Capitalism" issue of the journal *Business History* includes articles attacking the Chandler thesis using material from several countries, with a wide-ranging survey from Church 1990 and a summary from Jones and Rose 1990. John 1997 has more recently reviewed Chandler's contribution in a context of American history.

used to demonstrate the persistence of family firms and "personal capitalism" among the most successful and largest Dutch corporations.¹³

Other criticisms suggest the importance of wider political and social influences on companies which may create their own business cultures, sensitive to particular situations at particular times rather than these being homogeneous and unvarying.¹⁴ Moreover, seemingly external political and social links can extend into the internal systems of power and networks of association that make up a company. Recent initial analyses of connections, particularly interlocking directorships, between apparently separate companies operating in the colonising Netherlands and in the colonised Indies are relevant to this point.¹⁵

Chandler himself did not use any examples of fully integrated sugar companies. He cited only sugar refiners, some of which controlled raw sugar producers while others were merely supplied by them.¹⁶ He also made a distinction between agrarian and industrial capitalism, and used the plantation as his example of "an ancient form of large-scale production". However, by "plantation" he meant an American Southern planter's slave-worked plantation, differentiating this from those European examples less supportive of his argument. This is particularly significant in respect to this study. Considerations of Chandler's claims about management have focussed on management's upper levels, particularly in industrial organisations. However, the late colonial Java sugar industry was made up from capital-intensive factory-plantation combinations of modern industrial and agrarian production activities. The factory itself

¹³ Sluyterman and Winkelman 1990.

¹⁴ This is the theme of the collection *Business history and business culture* (Godley and Westall 1996).

¹⁵ See Kuitenbrouwer and Schijf 1998. These authors apparently use the term 'director' to refer to members (in Dutch, *commissaris*) of a statutory company's supervisory Board, rather than to the company's executive Director. I will be using it in the latter sense, elaborating this in sections H (i) and (ii) of the next chapter. Taselaar (1998: esp. chap 2) has given a delineation of an 'elite kernel' of Directors and Board members in a network of Dutch companies operating in the Indies from 1914-1940. Also, in relation to interlocking American capitalists' control of Caribbean sugar companies, see Ayala 1999.

¹⁶ Chandler 1977: 328, 336, 349; 1990: 514-5.

was obviously a large fixed capital investment, but so were the major irrigation installations and the railway systems. Large amounts of capital were required for the recurrent expenditure on payments for the seasonal labour force; rent for the leased areas of land and its preparation for cane planting and restoration for rice or other second crops after harvesting; fertiliser and fertilising; maintenance of roads, bridges, housing and other buildings; and wages of permanent employees. The standing crop embodied a large capital value which could not be converted until harvested and processed. Business therefore, frequently depended on interest-bearing credit advances in the meantime. Each factory-plantation combination was managed as a single integrated business unit with a hierarchy of management extending through it and beyond, usually to a Director in a city in Java or, more frequently, the Netherlands. Chandler's evidential pool did not extend to these cases.

Dye's recent publication, *Cuban Sugar in the Age of Mass Production* (1998), forms part of the continuing argument about the effect of major foreign, American, capitalism in the economy and politics of the ex-Spanish Caribbean. He used Chandlerian models focussed on management of individual factories in Cuba over the first three decades of the twentieth century. However, as Dye cautions,

The comments made here are about the organization within the factory, that is, at the plant level, not the firm level. ... I have said little about the organization of the Cuban sugar company or firm. To understand the organization of the Cuban sugar company, as much as the activities at the mill, the activities associated with sales and marketing must be analyzed, and these activities are outside the scope of this study.¹⁷

His emphasis on technological determinism as an explanation of the evolution of the structure of management could thus be more adequate than if he had widened his investigation to include the company or industry level. The demands of closer control over the flow of materials through the continuous process production line, reinforced

¹⁷ Dye 1998: 292, fn 102.

by sugar cane's characteristic of quickly deteriorating in sucrose content after being harvested, is sufficient to explain much of the evolution of the organization of the industrialised sugar factory. In contrast, in his *The American Sugar Kingdom* (1999), Ayala down-played the relevance of managerial theory in explanation, emphasising the importance of proprietorial rather than managerial control. In his view, the political, legal and financial system established by the neo-colonial power of the United States from the late nineteenth century was crucial in the development of this "Kingdom" controlling Cuban, San Dominican and Puerto Rican sugar mills. He argued that,

the functionalist belief that the large modern corporations rose and spread in the U.S. economy because they are efficient had been challenged by explanations that emphasize power relations, and not efficiency, as an important determinant. ... Vertical integration in a colonial context depended more than elsewhere on the power of the metropolitan state. ... International industrial organization reflects the basic reality of metropolitan state power, not abstract arguments about corporate efficiency.¹⁸

Ayala claimed that, when the power of American capitalist networks within the new American colonialism is ignored, technological determinism and managerial control do not adequately explain the developments of the wider structures of ownership and control in the growth of the ex-Spanish Caribbean, including Cuban, sugar industry from the late nineteenth century. Consideration of the accounts of Dye and Ayala provokes exploration of the extent to which Chandlerian factors provide adequate explanations for the internal management structures that were developed in the colonial Java industry and for the evolution of its system of companies from the 1880s to the early 1940s.

Dye's further consideration of the role of the factories' railways in the economic competition between cane growing by private growers, tenants of factory-owned land and factory employees on factory land, is not relevant to the politics and economics of

¹⁸ Ayala 1999: 120.

the Java situation with its leased and rotated land. Similarly, the role of these railways in competition between Cuban factories did not apply in Java, where factories had legally fixed boundaries to the areas in which they could plant.

Given the substantial criticisms of Chandler's model, it does not seem appropriate to use it as if it were established. Nevertheless, its propositions about the evolution of large scale industrial management draw attention to several significant possibilities for investigation in the specific case of the evolution of the Java sugar industry into its modern company form. Chandler's model appears to provide several tools for examination and analysis. First, he stressed that the managerial possibilities and demands for efficient new technology use are basic influences in the evolution of large scale modern businesses. This has obvious application in investigating the development of large scale modern sugar industries. Second, Chandler claims to have demonstrated that if large businesses are to compete and expand successfully they must evolve from a founding entrepreneur and family profit-sharing to professionally salaried hierarchical management by "outsiders". In his model,

Family and managerial firms represented contrasting approaches to the conduct of business. Whereas in family firms status tended to be determined by seniority and sentiment, position within the managerial organisation depended on particular skills, knowledge and competence. Motivation within family firms was complicated by non-financial considerations, such as family reputation and status within a community, providing employment for family, the enterprise as a store of family wealth, independence, employee welfare and succession.¹⁹

This suggests the need for a closer examination of the conventional account of the Java sugar industry's rapid transformation from personal to corporate ownership and management. Finally, his use of the concept of "transaction costs" could be useful in explaining the variety of relations between companies in the industry. These costs are

¹⁹ Church 1990: 19.

those involved in the transfer of goods and services from one operating unit to another. When these transactions are carried out between firms or between individuals, they usually involve the transfer of property rights and are defined in contractual terms. When they are carried out within the enterprise, they are defined by accounting procedures.²⁰

Literature relevant to the Java sugar industry includes that on Dutch colonial companies. An important disjunction between individual company histories and the more general literature about the sugar industry is the latter's homogenising and generalising about companies and their managements. Companies are not differentiated and described, possible variations are not considered. This study will remedy this weakness through consideration of individual colonial companies.

There are relatively few published histories of relevant Dutch colonial companies. These are mostly celebratory commemorative accounts, rather than scholarly examinations.²¹ Á Campo's (1992) analysis of the archipelagic Royal Mail Shipping Company (*Koninklijke Paketvaart Maatschappij, KPM*) is exceptional in its analytic enquiry, and its attention to the relationships, explicitly recognised at the time, between the mutual interests of the company and the evolving late colonial state.²² The KPM was given a subsidised monopoly of government inter-island steam-shiping in return for providing the logistical basis for the civic and military transportation needed by the state. Although the company continued operating until 1957, the period studied was from its establishment in 1888, to replace a British company providing the Dutch-

²⁰ Chandler 1990: 17.

²¹ Noticeable from comparing Jacquet's 1983 general list of sources on the history of the Dutch in Asia with the catalogue of the largest collection of Dutch commemorative company publications, held in the Dutch Economic History Archives; Dehing and C Seegers (1988), *Katalogus van Gedenkboeken: De kollektie gedenkboeken van ondernemingen en organisaties in de Economisch-Historische Bibliotheek*. Amsterdam: NEHA. In Schutte's 1980 revision of Colhaas' bibliography of colonial historiography, he reported "a vast quantity of memorial volumes dealing with economic history" but cited only a selected few (*Critical Survey of Studies on Dutch Colonial History*. KITLV Bibliographical Series 4: 115).

²² Also see his brief summary in Á Campo 1994.

Indies services as an extension of its British-India network, until the First World War. In his aim, to represent the KPM as a social-technological system with political, economic and spatial dimensions, Á Campo provided the most full and detailed description so far published of the external relations, internal organisation and evolution of a Netherland-Indies company. In the second, economic dimension, he included aspects of its business culture directly related to the integration and discipline of its personnel, including recruitment, wages and bonuses, pensions, training, housing and medical care.²³ Referring to Chandler's theory, he traced the KPM's increasing horizontal and vertical integration in cost-effective scale and scope, in arrangements with competing shipping services, in its management's control over servicing its own needs for port, fuel and personnel facilities and over connections with international shipping.²⁴ Also, by providing information about the differences observable in factors such as the assumptions about and treatment of European and Native personnel, the Netherlands-based and Indies-extended training, and the relationships between the management in Amsterdam and in the Indies, he emphasised the essentially colonial system of the state-company "bilateral monopoly". The business evolution of the KPM could not be understood as other than as a colonial enterprise.²⁵

The more conventional official company histories are useful because of their normal focus on activities of management. They give much positive attention to the successful decisions of founders, successors, Directors and Board members but, by their nature they do not provide enough information to reveal the workings of internal management. A clear Dutch colonial example of this is Gerretson's mammoth history of the Royal Dutch oil company from its late nineteenth century foundation on the basis of oil in North Sumatra until the First World War, published from 1932 in Dutch and from 1953 in English. It was more limited than Á Campo's smaller study. It was also more limited than the comparably epic story of the British colonial Hong Kong

²³ Á Campo 1992: Part 2, esp pages 495-526.

²⁴ *ibid*: 272-440.

²⁵ Eg. *ibid*: Part 1, 478-86, 492-4, 624-8.

and Shanghai Bank by King (1987-8, 1996). King considered activities, culture, recruitment and training of management down to middle and lower levels in great detail but, ethnocentrically, only for European staff. The usually limited perspective of these celebratory histories is largely a result of the limited anticipated readership: current and past management, shareholders and similar financially and personally related individuals. The usually limited information sources was a direct consequence of their having been put together by a senior employee from the company's collection of its annual reports. even from these limited sources material included or not is suggestive of the business culture of that part of the management.

There were six major financing and managing companies involved in the Java sugar industry.²⁶ Limited company histories are available but for only four of them. The largest was the Netherlands Trading Society (*Nederlandsche Handel-Maatschappij, NHM*). Given the central importance of the NHM in Dutch colonial and domestic economic history, it is remarkable that its only major published company history has been the finance- and trading-oriented two-volume account by Mansvelt, commissioned for its centenary jubilee in 1924.²⁷ Two full histories of the Amsterdam Trading Society (*Handelsvereniging "Amsterdam", HVA*) during this period have been published so far, one officially commissioned from Brand for its centenary in 1979, the other written by an ex-President-Director, Goedhart (1999). Both are valuable for the amount of information they provide about management activities, albeit embodying uncritical inside perspectives from the top. That said, Goedhart includes much material on the European employees' organised social lives on the plantations, and his final chapter resourcefully and resolutely defends the late colonial economic enterprise against critics. The commemorative history by Mees (1939) of the seventy five years of Internatio (*Internationale Crediet- en Handels-Vereeniging "Rotterdam"*) until 1938 draws on company archives, as did the unpublished Master's

²⁶ See Appendix 5 and section E in the next chapter for further basic information about these companies.

²⁷ There are other brief celebratory accounts, such as NHM 1963.

theses by Sipos (1992) and De Jong (1995). An archive-based internal history of the first few years of the Colonial Bank is still in draft form in those archives.²⁸ No histories were found for the other two of the six companies, the Netherlands-Indies Agricultural Company (*Ned.-Indische Landbouw Maatschappij, NILM*) and the Principalities Plantation Company (*Cultuur Maatschappij der Vorstenlanden*).

I found only a handful of company histories of other sugar factory-related companies. Essentially public presentations of the history of the Oei Tiong Ham Concern, which operated and financed several factories and traded sugar, have been given in Kunio's edited 1989 collection, and the earlier account by Panglaykim and Palmer (1970). Nevertheless, compared with the conventional company history, these include far more overt consideration of the political and cultural environments in which colonial businesses operated. From the dozens of Dutch colonial companies whose only business was the operating of sugar factories I found only half a dozen commemorative jubilee volumes published during the period. These are histories for the companies owning the *Gending*, *Tandjong Tirta*, *Poerwodadi* and *Srogol* factories and for the Java Plantation Company (*Java Cultuur Maatschappij, JCM*) which eventually owned five, and a 1914 volume of photographs of the five then owned by the main Eschauzier family company (*Maatschappij tot Exploitatie van de Suikerondernemingen Sentanenlor, Brangkal en Dinoyo*).

Celebratory company histories of other Dutch colonial businesses can be utilised to provide contextual illumination on management of the Java sugar producing companies. Those of a large sugar exporting company, the major Deli tobacco plantation company, and the main machine factory in Surabaya serving the sugar industry proved most useful.²⁹

²⁸ In the materials from the Colonial Bank deposited in the General State Archives in De Haag are several copies of a type-draft history of the 1878-1888 decade around its 1881 legal foundation, written by J C F Schor, Director 1940-5 ("Gedenkboek Koloniale Bank", ARA 2.20.04. Inv Nr 883). It is undated but apparently written after Schor's retirement as Director.

²⁹ See, respectively, Wellenstein, Krause & Co, Java 1932; Cremer 1929; Braat 1926.

During the 1990s several generalised descriptions and interpretations of Dutch colonial companies were published, distilled from their own commemorative histories and other publicly reported business data.³⁰ These recent accounts provide useful information about colonial management at the levels of managing Directors and major external relations with other, mainly financing, organisations, but not further insight on internal management. From one such distillation Gales and Sluyterman (1998) produced an account of the network of financing, directorial and intermediary relations of the Dutch "free-standing companies".³¹ These were companies with only a head office in the Netherlands with their main operations elsewhere, mostly in the Indies - thus differing from what these authors termed "multinational" companies which have major operations in the home country. As the majority of the companies operating sugar factories in Java satisfied this definition of "free-standing" Gales and Sluyterman's work is a valuable contribution to recognising and defining management in the sugar industry. However, the analysis has several limitations. Possibly the most important is that the characteristics of capital markets, distance, communication and expertise did not involve issues of power, interests or the politics (including of ethnicity) in the industry's colonial relations. Thus, "colonial" is used largely as a geographical term, rather than with its possible associated political-cultural meanings. As an artefact of the account's basic sources, other limitations include the tendency for most discussion on "management" to be really on "top management", thereby obscuring internal management activities. Also, because of the authors' ignoring the actualities of power or authority relations in management, they make a sharp differentiation between the making of loans to a company and taking equity in it. The former is defined as "a contractual mode of transfer [of capital] ... between savers and

³⁰ Sluyterman and Winkelman 1990, Gales and Sluyterman 1993, 1998.

³¹ "A 'free-standing company' is a firm set up in one country for the purpose of doing business outside that country. The term 'free-standing' was adopted to contrast this type of investment over borders with the more familiar one of today's multinational enterprise that begins with business operations at home and then moves abroad" Mira Wilkins, "The Free-Standing Company Revisited", chapter 1 of Wilkins and Schröter 1998)

borrowers", the latter as "a hierarchical coordination".³² This is necessary as an analytic tool of formal relations between sugar companies and their financiers, but it has drawbacks. It assumes that Board memberships represented only shareholders and not financiers, potentially overlooking the powers over management inherent in holding discretion over granting further loans to it and in having a minority of votes on its Board.

Since the ending of Dutch colonial rule in Indonesia there have been many secondary accounts and discussions written about its colonial sugar industry. Most of these have focussed on the Cultivation System and, in some cases, aspects of its transition to a free system, particularly in labour and other relations with local Native society.³³ Nevertheless, others refer to more recent phases of the industry, or to more than one stage of its history since the start of the Cultivation System.³⁴ In addition, the *effects* of the management of the sugar industry during this period have been dealt with by authors of related topics. These include Breman (1983) on control of land; Fernando (1982) on consequences of the plantation economy on Native society; Houben (1992, 1994a, 1994b) on European plantations in the region-level politics and economics of the Princely States; Ingleson (mainly 1986, also 1981, 1987, 1988, 2000) on Native worker and union struggles; O'Malley (1990) on a general survey of plantations from the beginning of the Cultivation System until 1940; Ravestein (1998) on the development of state irrigation schemes; Van Schaik (1986) on peasants and use of land; Shiraishi (1990) on the modernising of Native political ideologies and actions; Suhartono (1983) on rural banditry on Java; and Taselaar (1998) on the

³² Gale and Sluyterman 1998: 305.

³³ Eg. Elson 1978, 1979b, 1982, 1984, 1989, 1990, 1994a, 1994b; Fasseur 1986, 1991, 1992; Fernando 1982; Houben 1989, 1994a, 1994b; Knight 1980, 1982, 1990a, 1990b, 1992, 1993, 1996c, 1997; Leidelmeijer 1997; Van Niel 1992; Purwanto 1987.

³⁴ Boomgard 1988; Handjojo et al 1987; Hiroyoshi et al 1996; Knight 1982, 1990b, 1992, 1993, 1994, 1996a, 1996c, 1999b, 1999d; Knight and Van Schaik 1999; Leidelmeijer 1997; Mubyarto 1969, 1977, 1984, 1991; Mubyarto et al 1968; Van Schaik 1986, 1992; Soetrisno 1980; Wertheim 1953, 1993. There is also a report (Kano, Hüsken and Djoko Surjo 1996) from a unique project in which a combination of Indonesian, Dutch and Japanese teams concentrated on the economic, social and political developments in and around a single previously well-documented North Coast factory, *Comal* (earlier *Tjomal*).

organising of colonial lobby groups. Although these works do not provide central material on the organisation and personnel of sugar factory or company management itself, I use them to add to my accounts of this management. Similarly, more general economic histories in which the sugar industry is given its appropriately significant place are used for the aggregate economic data they provide.³⁵

As mentioned previously, the evolution of management in the Java sugar industry from the 1880s was rooted in a past in which the Cultivation System had been first supplemented then mostly replaced by the Free factories. Management in the Cultivation System involved mainly private management of the factories and government management of the fields. However, although there is a large amount of descriptive literature about the industry *subsequent* to the deliberate destruction of the Cultivation System, this includes little serious consideration of the management of that industry. There are only anecdotal reports that the factories were owned by individuals or families with Administrators, often the owners, still living in the seignorial style of what has been labeled as "the old times" or "the good old times" (*Tempo Doeloe, De Goede Oud Tijd*).³⁶

A few recent publications referring to the industry from the 1880s to the 1930s some do provide material about different elements of management within it, notably those by Knight (1994), Leidelmeijer (1997), Taselaar (1998), Ingleson (1986) and, as already reviewed, Gales and Sluyterman (1998). Knight's account of Native workers in some of the North Coast sugar plantations and factories includes detailed information on managing their recruitment and work activities from the perspective of management. Leidelmeijer provides a detailed description of the technological changes in the Java sugar factories from the industry's beginnings until early in the twentieth century. Her account includes reports on some of those involved in introducing this

³⁵ Allen and Donnithorne 1957; Boeke 1942, 1946a, 1946b, 1953; Booth 1988, 1998; Burger 1975; Furnivall 1939; Van der Eng 1993a, 1993b; Geertz 1966; Gonggrijp 1957; Lindblad 1993a, 1996b, 1998; Sartono Kartodirdjo and Djoko Suryo 1991; Maddison and Prince 1989.

³⁶ Examples include Nieuwenhuysen 1943, 1981, 1982d, 1988a and b; deeply-informed fiction such as Couperus 1924; or Daum 1883, 1987 (though not referred to sugar) and much later reminiscencing accounts such as Dermout 1951.

technology, and how this was done by individuals and by (first informal then formally organised) networks. Taselaar's intricate account of the organising of the colonial lobby in the Netherlands and the Indies from the beginning of the First World War includes much detailed information on the management of Java sugar interests.

Ingleson's (1986) account of the post-World War I period of industrial organisation and activism by Native labour includes the major account of the brief rise and fall of the attempted Native sugar workers' movement in colonial Java. His description of management responses in opposition to this portrays elements of the organization of management and its complicated relations with government over the duration of that important industrial struggle which is unique in the literature. So far, there have been no comparable accounts of the relations of management with European employees.

Several writers have described the effects of self-interested factory managements in their relationships between factories and the local Native society's land and labour. However, these descriptions do not investigate the organisation, culture or evolution of managements themselves. Nor do they attempt to place the factory managements within the industry's developments in its modern company stage. Management was mainly portrayed and interpreted by Breman (1983) as a local monolithic interest, advantaged by government policy and government powerlessness when management acted against the land and water interests of the rapidly increasing numbers of smaller land-owning or landless peasantry in the Cheribon region. Elson's concern with management, in his 1984 account of the various interactions of the sugar industry with peasant society in the Pasuruan area of East Java from 1830 to 1940, concentrated on its arrangements of labour recruitment and land renting. Soetrisno (1980) and Suhartono (1993) limited their considerations of management to describing the general effects of the practices of the sugar plantations on Native life in their local rural regions.

The published literature on other Indies plantation managements mainly refers to East Sumatran tobacco and rubber, and not to other plantation crops on Java.³⁷ There were relevant and significant differences between Sumatra and Java: an absence of a colonial sugar industry on Sumatra, "frontier" situations in the founding of Sumatran plantations, and Sumatran use of imported Chinese and Javanese coolie labour. Therefore, the published work on Sumatran situations provides contrast and illumination of the management of the evolving Java sugar industry over the same period.³⁸ Unfortunately, comparisons utilising the twentieth century Dutch novels set on Sumatra plantations could not be made as there were no Java plantation equivalents to these "Deli Genre" books.

Several individual and collective descriptions and theorisings were published in the 1980s and 1990s about a "colonial production practice" in plantation-based agriculture, but these were not readily useful to this study of management. Concentrating on the masses of casual unskilled labour, they attempted to analyse and demonstrate the existence and extent of processes of proletarianisation in an evolving system of capitalism.³⁹ They did not include close examination of the management involved in organising any such evolving system of capital, land, labour and technology.

Recent Post-Colonial explorations of colonialism have emphasised the active work that had to be done to manufacture and maintain the accepted certainties used in

³⁷ For an example of the smaller, simpler and 'flatter' management of other plantation industries see the outline of the administrations of the various Michiels-Arnold plantations (Bolder et al 1979). Descriptions of other plantation crops such as tea (sep Lukman Hakim 1995) or coffee (Fernando and O'Malley 1990) do not report any detailed investigations into their management.

³⁸ Relevant to this are the descriptions of the managing of the colonial rubber and tobacco industries on the East Coast of Sumatra by Thee Kian Wie 1977, Pelzer 1978, Stoler 1985, and Breman 1987/89, while Wertheim (1993) has relatively briefly compared general plantation situations there and in Java sugar, and Fernando and O'Malley (1990) have described coffee cultivation near a sugar area. Houben (1993a) has suggested that some of the anti-colonial generalisations in these could be undermined if other available material were studied.) For the "Deli Genre" novels see Székely 1979; Székely-Lulofs 1931, 1932; also see Lucas 1986, Kousbroek 1992b and, especially, Clercx 1991 for analyses.

³⁹ Eg. Tichelman 1980; McEachern 1979, 1982; Knight 1982, 1990b, 1992; Brass and Bernstein 1992; Breman and Daniel 1992; Suroyo 1994.

their cultural processes. Some of these appear to be exuberantly self-confident assertions of newly invented certainties, but there are more cautious and subtle formulations.⁴⁰ Among these are the suggestions by Stoler and Cooper (1997) for studying the conceptually related categories used in colonial discourse. They emphasise the constructing, maintaining, challenging, hybridising and crossing of the artificial and innately permeable boundaries between categories in the cultural processes of colonial rule and change. They also stress their role in attributable identities and moral assumptions and threatened subversions of these. Ashcroft has asserted that a "a post-colonial analysis addresses the cultural transformation brought about by the colonized in their engagement with the colonizing power, its dominant culture and universalizing discourses as a natural outcome of the economic and political effects of this relationship", and that the "centrality and importance of sugar makes it a key focus of the range of historical, cultural and political issues addressed by post-colonial theory".⁴¹ Until recently, retrospective studies of the Java sugar industry had not overtly utilised the approaches of Post-Colonial theories. Knight has now applied these agendas in his examinations of "colonial binaries" of "Western and Eastern" or "European and Asian" in discourses about technology, ethnicity, and "coolie" labour in the industry.⁴² This area of epistemology suggests further examination of the cultural practices of management and other self-defined interests in the Java sugar industry, in their attempts to establish, maintain or subvert boundaries of ethnic and class categories will be fruitful.

⁴⁰ For a cautionary note on the use of the more general theorising stances of Post-Modernism in still strongly hierarchical post-colonial societies see Heryanto 1995. Kennedy (1996) has attempted to give a brief balanced survey of the potential usefulness of Post-Colonial theory for (English?) historians of empire.

⁴¹ Ahluwalia et al 1998: 40.

⁴² Knight 1998, 1999a, 1999b, 1999c (the latter three included in revised form in Knight 2000b). Also see Locher-Scholten 1994b, 1997. Some concerns about retrospective accounts from ex-Indies Europeans are considered in Locher-Scholten 1995.

D. FURTHER SOURCES

This thesis draws on a wide variety of sources, published and unpublished, several previously untapped. A vast amount of material is available in a range of archives. The material produced, usually written about current or recent situations, had particular audiences and intentions in mind. It obviously states information but also provides indirectly for cultural and political analysis because its writers used ideological categories and perspectives of their times. In my study, this material is mined for direct information about what management was and did, and also used indirectly to expose the cultures of management.

Agricultural, transport, milling and processing technologies were comprehensively and continually reported, documented and reviewed from the late nineteenth century on.⁴³ For a small minority of factories, a very large amount of the operational data that was reported administratively within their companies remains available. Much technical information about specific factories, and surveys of many together with discussions of general reference and relevance to the industry, was reported in the thousands of pages of articles and reports published in the *Archief* each year. The almanacs, published by the industry from the mid-1890s, give descriptive information about all factories.

⁴³ Eg. Handboek 1905-1938; Douglas 1910; Emmen 1918/21/26/30; Prinsen Geerligs 1918, 1930, 1934; Honig 1931; Harreveld-Lako 1932; Van der Linden 1946; the hundreds of articles published each year in the *Archief voor de Suikerindustrie in Ned.-Indië*, the Java industry's journal, from the mid-1890s until the early 1930s; and the several series of bulletins from the industry's separate Research Stations from the 1880s then, after their amalgamation, from the Agricultural, Chemical and Technical Divisions of the single Station). Official retrospective summaries of the industry's development include those of its journal's long-term editor (Dickhoff 1904a, 1910a, 1919). The Java industry is also covered in general accounts of the development of the sugar industry worldwide, such as Deere 1950 and Galloway 1989 (especially 209-213, 217 but only up to the beginning of the First World War), but relatively superficially and without unique considerations of its management. These general references are more useful for the technological information provided about the industry in general until the early twentieth century, although Leidelmeyer 1997 is more detailed and useful about the Java industry in particular.

The celebratory jubilee retrospectives published by individual companies owning one or many factories have already been mentioned. Two celebratory books about the whole industry were published in the 1920s by the central sugar organisations in the Indies and the Netherlands.⁴⁴ Other self-descriptive accounts include special issues of newspapers, with articles written by industry representatives, and various promotional publications about the whole Dutch East Indies, using material supplied by the industry.⁴⁵

The contemporary attribution of an important role to the sugar industry in the economics and prestige of colonial development is indicated by its routine inclusion in the more general surveys and histories published about the Dutch East Indies from the beginning of the twentieth century until after the end of the colonial period, but these do not provide unique material on the industry's management.⁴⁶

At the overall industry level, the minutes of meetings, bulletins and annual reports to members of the collective associations of sugar management in the Indies and the Netherlands are still available. These associations were, in the Indies, the General Syndicate of Sugar Manufacturers in the Netherlands Indies (*Algemeen Syndicaat van Suikerfabrikanten in Ned.-Indië*) and, in the Netherlands, the Union of Owners of Sugar Businesses in the Netherlands Indies or the Netherlands Indies Sugar Estate Owners Union (*Bond van Eigenaars van Ned.-Indische Suiker Ondernemingen, BENISO*). A major reason for founding central organisations was to coordinate the activities of those who became their members. This generated copious written communication, from salaried administrators to members and between the administrators of corresponding organisations in the Indies and the Netherlands.⁴⁷

⁴⁴ Tichelaar 1927a; Van Mandere 1928.

⁴⁵ Examples of the former are *De Indische Post* 27/9/1924 and *Economisch Weekblad voor Nederlandsch-Indie*, December 1932/January 1933; of the latter, De Vries 1928 and *Yearbook of the Netherlands East Indies 1916 and 1920*.

⁴⁶ Eg. Day (1904/1966, [used as a liberal text at the Leyden Indological faculty for colonial officials]: esp 392-4); Van Helsdingen and Hoogenbraak (1941: esp 286-314); Ponder (1934: chap 16); Vlekke (1959/1965: 332), Van Doorn 1994.

⁴⁷ Such as minutes of meetings and communications from the central administration (Dagelijk Bestuur) of the General Syndicate of Sugar Manufacturers in the Netherlands Indies

Much of this is preserved in public archives. Both central sugar organisations were members, and at times rivals, of the peak lobby organisation for colonial business in the Netherlands, the Netherlands-Indies Business Council (*Ondernemersraad voor de Nederlands-Indies, ONRANI*), and its daughter in the Indies, the Indies Business Union (*Indisch Ondernemersbond, IOB*). Both these have archived material.

The journal published by the sugar industry's middle and upper management is a fundamental source. More overtly critical political analyses of the industry (in general or in particular) appears in contemporary Dutch and Indonesian language newspapers and organisational organs. The journals of the European lower management staff union and the short-lived Native employees' union are most directly relevant. Other major critical references are to be found in the proceedings of the Peoples' Council (*Volksraad*) in Jakarta and in the contemporary writings of Dutch politicians, including the conservative H. Colijn, liberal Mr. C.Th. van Deventer, and the Socialists Ir. Ch.G. Cramer and J.E. Stokvis.

The colonial government's administration in the Indies and the Netherlands produced copious routine paperwork and special reports on the activities of the sugar industry, in particular and included in more general surveys. Because they are written as reports by government officials about matters within their areas of responsibility, such reports tend to demonstrate how effective any government action had been or how apparent problems, especially continuing problems, were due to non-governmental activities or a lack of resources made available to the official.⁴⁸ Nevertheless, special reports commissioned on exceptional topics, such as local uprisings or on proposed changes to land-leasing arrangements, provide insights into the industry which are otherwise unobtainable. Moreover, the series of Transfer

(Algemeen Syndicaat van Suikerfabrikanten in Ned.-Indië, ASNI) to the Union of Owners of Sugar Businesses in the Netherlands Indies (Bond van Ned.-Indische Suiker Ondernemingen, BENISO) or between the Business Council for Neths. Ind (Ondernemersraad voor Ned.-Indië., ONRANI) and the Indies Business Association (Indische Ondernemers Bond, IOB).

⁴⁸ A continuing suspicion of Chinese, Arabs or wealthy Natives, in their relations to the ordinary Natives and in the opacity of their activities to the government, was also a common ideological thread which may have had implications for reporting on Chinese-owned factories, on labour recruitment and land-leasing.

Reports (*Memories van Overgave, MVO*), which were written in prescribed formats by European officials for their successors and for superiors, provide continual threads of information about what these officials considered most relevant concerning any sugar industry in their region of responsibility.

Part of the control of Dutch colonial society was through the formalisation of organisational life. Any intended association, whether business, social or political, was required to have a formal constitution and statutes approved by the government. Without this legalised foundation an association could not exist or hold public meetings. Many of these statutes are available in archives.

As mentioned, the usual commemorative company history is based on its annual reports. These were aimed at satisfying legal requirements of disclosure, and were designed to provide what the Directors considered the shareholders wanted to know and should be told, emphasising the ways the Directors and other managers had satisfactorily carried out their duties in the shareholders' best interests. Many of these annual reports of the sugar companies are available, and form a major source of information to this thesis.

More detailed insights about the top management of companies can be obtained from the minutes of their Board meetings. However, only a small, probably biased, selection have survived. Archived with documents from the Head Offices of the large Netherlands-established financing and management companies, those in existence are either from fully-owned subsidiaries or companies so closely related financially and administratively to them that their Board meeting minutes were kept in their financiers' offices. Similar biases also affect the many surviving internal and intra-company operating reports of factories.

There was a variety of other relevant publications during the late colonial period. It includes advisory material about training and careers for potential future

Dutch employees in the industry, and articles in Dutch intellectual journals.⁴⁹ Some contemporary Dutch university theses were of direct relevance, but only a handful have been consulted.⁵⁰

These materials are spread through several collections, mostly in Indonesia and the Netherlands. The single largest collection of annual reports of companies operating in the Indies is the Hicks Collection, at the Indonesian Institute for Science (*Lembaga Ilmu Pengetahuan Indonesia, LIPI*) in Jakarta. In Indonesia other collections, mainly of journals, newspapers and various association reports, are at the National Library (*Perpustakaan Nasional*), also in Jakarta, while some remain in the library of the Indonesian Sugar Research Institute (*Pusat Penelitian Perkebunan Gula Indonesia, P3GI*) at Pasuruan.⁵¹ In the Netherlands important archival collections are held in the Royal Institute of Linguistics and Anthropology (*Koninklijk Instituut voor Taal-, Land- en Volkenkunde, KITLV*) in Leiden, the General State Archives (*Algemeen Rijksarchief, ARA*) and national Royal Library (*Koninklijke Bibliotheek, KB*) in De Haag, and the International Institute of Social History (*Internationaal Instituut voor Sociale Geschiedenis, IISG*) and Royal Tropical Institute (*Koninklijk Tropeninstituut, KTI*, formerly the Colonial Institute) in Amsterdam.⁵² (In Australia the microfilm collections of Monash and Flinders universities contain some relevant archival material copied from the ARA and KTI.)

⁴⁹ Respectively Vereeniging Oost en West 1911, 1917, 1929 and such as Levert's 1937 article on Native workers in *Koloniale Studien* (which, like his 1934 doctoral thesis, appeared to be from the management perspective).

⁵⁰ Tio Poo Tjiang (1923) on the export sugar market and P. Levert (1934) on Native labour in the industry were published. G.J. van der Flier's 1930 thesis on theories of land rent and the lease of land by the Java sugar industry ["Grondrententheorien en de grondhuren in de Java-Suiker Industrie", University of Amsterdam] and A. de Graaf's 1931 discussion of the international sugar trade and the Java industry ["Het internationale suikervraagstuk en de Java-Suikerindustrie", Netherlands Commerce School, now Erasmus University, Rotterdam] apparently were not published.

⁵¹ A preliminary search indicated little relevant material in the Indonesian National Archives (Arsip Nasional, Jakarta) which was not also in the Netherlands.

⁵² For accounts of the founding and support of this as a majestic political and educational resource for Dutch colonial capitalist interests see Hasselman 1926; Taselaar 1998: Chap 4.

Regrettably, the Native workers who were managed or who carried out the lowest management roles themselves do not seem to have left any accounts of management. Moreover, there are no European records either of these workers' opinions or of materials from which their interpretations can be convincingly reconstructed. Almost nothing about the lives of Native sugar workers in Java was ever published by Europeans. The little that was, usually appeared years after it had been collected.⁵³ Such omissions are suggestive about the Dutch colonial system and accentuate Dutch tendencies to a "colonized Indonesian historiography"⁵⁴ There were no anthropological studies, biographical writings or reported interviews with Native workers during the entire colonial period.⁵⁵ The consequent lack of opportunities to compare European managers' claims and interpretations with those of Native workers, including those in the lower management positions, severely limits what can now be ascertained about management in the industry.

⁵³ Eg. Van Moll (1914, based on a 1902 Syndicate-instructed survey of the domestic economies of Native workers at one sugar factory); Van Moll (1921, seven years after repatriating to the Netherlands); Wertheim (1953/1956, based on a 1939-40 survey of domestic expenditure by plantation, including sugar, workers). For a claim that this latter was not published due to the colonial government's fears that the Japanese could use the findings against it see Wertheim 1978: 89-90, fn 16. Also see Husken (1992, 1994) for discussions of the earlier surveys.

⁵⁴ As recently pointed out by Sartono Kartodirdjo (1997). For decades related concerns about Euro-centrism have been considered by many writers, among others in Hall (1961) Smail (1961), Soedjatmoko (1965) and Spears (1993) but no consensus or consistencies appear in practice.

⁵⁵ Cf. the anthropologically-structured reminiscences from the perspective of Puerto Rican cane field work (Mintz 1960/1976); the anthropological and other studies in the Java sugar industry in the post-colonial period (Breman 1995; Collier 1973; Hartveld 1996); the practical details of the processes of production and exploitative exchange between peasant producers, middlemen and capitalist sugar mills in the Gorakhpur region of colonial northern British India (Amin 1984); or the account of mythic beliefs among workers in the Philippine sugar industry as it was developed during the Spanish and, this century, American colonial states by a planter class in a capitalist economy (Aguilar 1998)..

E. THE INTENTIONS OF THIS STUDY

As well as the central thesis of a need to historicise management, several further sub-theses will be examined. Some of these are about the influences on the organisation and the personnel of management of the Java sugar industry from the industry's intricate relationship with the peculiarly Dutch colonial system. Among the system's unique characteristics was its mixture of ethnicities. Various Dutch policies since the 17th century meant that most of the archipelago's tiny minority classified as "European" were Indo-Europeans, mestizos of mixed European-Asian backgrounds and cultures.⁵⁶ There had also been a long and significant "Chinese" presence, also ethnically mixed, among the business classes of the colonised economy⁵⁷

I will argue that the evolution of the organisational culture and personnel of management in the industry included two related ethnicising elements. Not only was there a systemic racialisation of late colonial society but, within this, Indo-Europeans were keen to be categorised as ethnically European. Central to these processes was a changing colonial dual labour market in which a small part of the industry's workforce was recruited from the Netherlands and the far larger part was recruited locally⁵⁸

More generally, I will argue that changes in management of the Java sugar industry cannot be adequately understood without recognising that they reflected the

⁵⁶ For general background see Taylor 1983 and Blussé 1989. The most extensive statistical analysis of the ethnic mixtures of the European segment of the Indies population has been that of Van der Marle 1951-2.

⁵⁷ For further background information about the ethnic Chinese and their activities and relations with the majority Native peoples see Cator 1936; Suryadinata 1971, 1976, 1978; Mackie 1976; Coppel 1976, 1983; Blussé 1986; Kunio 1989; The Siau Wie 1989; Rush 1990; Fernando and Bulbeck 1992; Dick 1993.

⁵⁸ It must be recognised that the duality in this model of a colonial labour market differs from that in the fatally flawed theory of a colonial "dualistic economy". The latter model of an economy with two separate components, traditional or informal and modern or formal, was originally formulated and elaborated for the Dutch Indies in a series of publications by Boeke. Although such models "were much in vogue in colonial and early post-colonial times", they were not accepted by all, even by all economists, at the time. Subsequently, their accuracy and helpfulness have been heavily discredited on theoretical and empirical grounds. See Boeke 1940, 1942, 1946a, 1946b, with a final complete form published in 1953 and criticisms in the contributions by Mackie, Manning and Dick in Garnaut and Mackie 1980. The colonial debate, including Boeke's as well as alternative and rejecting views, is well covered in Wertheim 1961.

industry's part in a stage of colonialism during which the Dutch East Indies was being changed into its final form as a late colonial society. Management had to evolve within the moves towards a national economy, a densely institutionalised state, and an interventionist, developmental government with an overall coherent political and administrative control.⁵⁹

I will also argue that management evolved within constraints imposed by colonial relations. These relations were limited by the small population of the Netherlands, relative to that of its Indies colony and absolutely compared to other colonial powers, and by the distance between the Netherlands and the Indies.

Another sub-thesis is that the evolution of management was significantly influenced by the Dutch colonial policy intention to protect the economically weaker Native population from the economically stronger Europeans and Chinese. This produced an integrated industry of factories processing cane from a shifting patchwork of rented fields in a competitive market that combined shortage of agricultural land with inalienable Native land rights. Management in the Java industry thus had to differ from that common in other tropical cane sugar industries in which the factory owners would also own the plantations or successive harvests were grown in the same fields from the same cane roots.⁶⁰

Statements about the management of colonial plantation industries cannot be simply homogenised, even across a single colony at a single time. I claim that management of the Java sugar industry was unique in the late colonial Indies commodity economy because the processing of its agricultural raw material involved large and extremely advanced industrial technology. Other major crops of rice, coffee,

⁵⁹ For elaboration and discussion about these concepts see Darwin 1999 and, with particular attention to the Dutch East Indies, the contributors to Cribb 1994 and to Lindblad 1993 and 1996; Touwen 1999; the [forthcoming] collection by Dick Houben, Lindblad and Thee Kian Wie; and, with reference to the debate about the nature of Dutch imperialism at this time, Lindblad 1989; Locher-Scholten 1994a; Wesseling 1988, 1989.

⁶⁰ For other industries see Ayala 1999; Albert and Graves 1984; Amin 1984; Attwood 1992; Deerr 1950; Dye 1998; Galloway 1989; Tio Poo Tjiang 1923. The practice of cutting off the ripe cane near ground-level and leaving the roots to grow another crop is usually known as ratooning.

tea, rubber, tobacco or kapok involved limited and simple processing with relatively small and cheap equipment.

In examining sub-theses related to Chandler's model of competitively successful large-scale industrial management, I will argue that the evolution of the Java sugar industry followed his principles in several important ways, but differed from them significantly in others. One of these differences is that simple and universal assertions about "family" compared with "professional" business management cannot be made. Secondly, Chandler's principles for competitive victory in an industry did not apply because, although the Java sugar industry companies were continually active in maintaining their collective international competitiveness, they did not compete with each other in their sales market. An effect of this was managements increasingly shared information about internal operations for evaluating their own internal control practices, rather than maintaining secrecy and attempting inter-company competitive advantage. Thirdly, although companies concentrated on improving control over their continuous-process manufacturing and its integration with their agricultural production, they deliberately avoided any distribution and marketing divisions. What was sold through a single exporting body production was a commodity, defined by characteristics of the product itself not those of its producer. The evolution of companies in the industry thus differed from those embodying mass production and mass distribution used by Chandler. Fourthly, because other countries' domestic politics and international trade politics were crucial basic elements in the development of the Java sugar companies, Chandler's model is shown to be adequate only in particular political settings.

This first chapter has outlined the field and intentions of this study of the dynamics of change in the management of the late colonial Java sugar industry from the late nineteenth century until the late 1930s. The next three chapters will describe three successive stages of the evolution of that management. These, starting from about 1884, 1917 and 1930 respectively, were marked by transitions in management in

response to what were considered crises in the industry disrupting its apparently smooth and incremental development and thus likely to be especially illuminating.

In these accounts I will describe and account for changes in relations between ownership and management, in management structures, and in the recruitment, training and promotional patterns of management personnel which occurred. The work will compare the extent to which changes were responses to the technologically driven need to continually find and select new agricultural and processing methods and to recruit and maintain personnel who could most effectively implement these with the extent to which changes were precipitated by other perceived needs, particularly political demands.

It is well-known that the managements of the factories and companies did not operate in isolation from each other, and several central organisations were formed. I will show how changes in management over this period were consistently in the direction of forming larger networks and units, more coherence and more standardisation.

To understand the activities of managements during the periods of change, these activities must be seen as influenced by beliefs about the private and government resources available to managers, to their allies, and to their competitors or challengers. An obviously relevant resource was finance, including the ability to pay wages and thereby have discretion to recruit, retain and promote employees. Other resources were equipment and materials; technological, political and legal information; culture, including "personality"; and control over purchase of whatever was produced. Allies and opponents included government officials, Native and European employees, nationalist movements, sugar buyers, owners or financiers, and other countries' sugar industries. The availability of resources to meet varying demands of management was not simply a matter of objective reality, but involved more complicated perceptions of reality. Management perceptions about its own resources and intentions relative to those of others included beliefs about how these others perceived management and its intentions. These layered perceptions were elements in the continuous social defining

of social relations. It will be argued that the evolution of management included its attempts to define situations to interpret its own interests to increasingly wide audiences, as colonial society in the Indies and the colonial relations between the Indies and the Netherlands changed.

The final chapter will then summarise in terms of the major thesis and several sub-theses argued about the management organisation and personnel of the colonial Java sugar industry from late in the nineteenth century to the end of the 1930s during what can be termed its modern company period, effectively the final half dozen decades of its existence.

Chapter 2 MANAGEMENT AND THE COMMERCIAL CRISIS OF 1884

A. INTRODUCTION

This chapter describes the development of management in the Java sugar industry during the late nineteenth and the beginning of the twentieth century. This development includes changes in the form of ownership from personal to corporate, the emergence of major finance companies as owners and managers, the formation of an upper management of Boards and Directors, the construction of a middle and lower management system in the factories, collective organisation of middle managements, and the beginnings of special training for middle management. It shows that the period after 1884 was not the sharp watershed in management suggested in the conventional account, but included more continuity and less completeness of change. The listed changes in management during this stage of industrial and colonial development cannot be adequately explained by technological imperatives alone. Although management had to respond to only limited external political challenges in Java, its new collective organisations were evolved to serve a coalescence of its industrial and political priorities within the colonial conditions of the time.

B. THE 1884 CRISIS AND THE FINANCING OF THE FACTORIES

The 1884 commercial crisis resulted when the world production of sugar was increased so far that its selling price on the free export market suddenly fell. In Java prices fell below current production costs. Between 1882 and 1884 the average world export price roughly halved, largely from the growth of the sugar beet industries in Europe and the United States of America. The management of the Java industry had no control

over this. Selling prices were made in the international commodity market, influenced by factors elsewhere. The Java industry was a colonial industry and its controlling metropolitan power, the Netherlands, was too small to provide a significant protected domestic market or to influence the world market on its colony's behalf. The Indies domestic market for sugar was too small to buy much of the export-oriented production at profitable prices. The government administration in Java could not afford significant subsidies, although it could reduce its potential revenue from the industry. Being aware of that, much of the industry's collective management lobbying of the government was about reducing taxation and charges, such as those on exports and for state railway transport.⁶¹

Two significant extra problems faced the management of the Java sugar industry.⁶² Externally, the Dutch government acceded to domestic political pressures to support the far smaller Dutch sugar beet industry, thereby reducing the metropolitan import possibilities for its colony. Internally, a serious cane disease *serih*, appeared and started spreading in the western Java sugar areas, reducing cane growth and sugar yield thus increasing unit production costs. An expansion of sales into previous export areas could not provide a commercial solution, as these areas were being politically closed off. Moreover, the sugar exporters could not foresee new markets that would take Java sugar at its current price, as cheaper supplies of this commodity product could be obtained from the industries of the protecting countries.

The only solution was to cut production costs, and hope to continue in business long enough to hold a place in the evolving lower price world market. Because of the maintenance in Java of the compulsory requirement to rent and rotate fields after each harvest, the Java industry had a structural cost disadvantage relative to other tropical

⁶¹ See Tio Poo Tjiang 1923: 25 for mid-1890s cases.

⁶² The crippling or protection of other cane sugar industries, and the provision by other governments of national protection to beet sugar industries, have already been thoroughly described, eg. in Albert and Graves 1984, which, however, omitted the Java industry.

sugar industries. This made relatively high cultivation costs unavoidable compared to the ownership or long tenure renting of land and ratoon-growing of cane elsewhere. In Java extra ground-working agricultural labour and a complete new supply of seedlings had to be paid for annually. Local labour wages and land rent were based on the local market, thus reductions were largely out of direct control of management.

However, a significantly increased productivity lowered costs for most factories by improving efficiency through technology and scale.⁶³ During the two decades from the mid-1880s average planting areas increased, slowly at first but clearly accelerating at about the turn of the century. This doubled the average area being rented, worked and harvested to supply each factory, to about 500 hectares. The average cane yield per hectare was also increased through more effective agricultural practices and cane varieties. To more efficiently process this increased volume of cane factories were enlarged massively during the last part of the 1890s. The average processing capacity was increased by over half in the final five years of the nineteenth century and the first five of the twentieth. Exports were roughly stable during the 1880s, jumped and flattened again during the majority of the 1890s, then were steadily increased during the later 1890s until another plateau for a few years from about 1905. After this, the plantation banks' profits from sugar, non-existent or small and erratic during the twenty years from the 1884 crisis, increased in amount and reliability.

Financial problems arose when the developments in scale and technology of operations required continuing and increasing supplies of capital. Until this time most factory owners had operated mainly on quite short term personal credit from financiers who annually advanced the working capital needed to plant, grow, harvest and process each crop. These advances were made on the basis of consignment contracts for the resulting sugar, delivered to them well over a year later to on-sell to an exporter

⁶³ The changes reported in this paragraph are calculated from figures taken from HCHO 1888, the General Syndicate's published surveys of factories from 1895 and Wellenstein, Krause & Co 1932: table on page 44. For the banks' profits see Helfferich 1914: 48, 52, 55, 84, 88-9, 138-9, 158, 169, 176-7, 186-7. For general accounts of the growth of the industry over this stage see Dickhoff 1904a, 1910a, and Anon 1910.

unless, exceptionally, they were also an exporter themselves. Normally 2 to 2.5 per cent interest would be charged on this advance, with a higher rate of 7 to 8 per cent on other loans for more major fixed capital expenditure. Factory owners relied on the annual sales of their sugar production to repay various combinations of consignment contract and fixed capital loans. Owners were continually in debt to their financiers, whose profits came from the interest charges, fees, and the commission on reselling the sugar. The sudden collapse of sugar prices made it obvious that some owners would not be able to repay the debts they had already accumulated and the new debts they would raise to pay for the putting in and processing of the next crop. Moreover, the financiers could not expect to sell the product from that crop until about one and a half to two years time, and then at a price which would not cover its possibly increased costs. Clearly, the previous system could not be maintained. Unless some different arrangements were made, many of the factories would not be financed to continue.

Nevertheless, there is a need to qualify the subsequent labelling of this stage as a crisis for the whole industry. It was disastrous for some factories, and a short and medium term crisis for the major financiers, but not necessarily for all the factories on Java. Enough long-term optimism was expressed by managements to continue or successfully renegotiate most of the financing arrangements. Very few factories closed. Rather, during this and the next decade, about four dozen *new* factories were opened, nearly three dozen of them *after* the 1884 crisis year. A severe slowing of new openings in the middle 1880s did not last long⁶⁴ New factories were built in nearly all sugar areas except along the North Coast west of Semarang. Moreover, capital was obtained for the enlarging and re-equipping of many of the existing factories.

⁶⁴ In 1880 two opened; 1881 none; 1882 two; 1883 six; 1884 three; 1885 and 1886 one each; 1887 none; 1888 and 1889 two each; 1890 seven; 1891 seven; 1892 two; 1893 four; 1895 one; 1895 three; 1896 and 1897 one each; 1898 and 1899 none; 1900 one. (Figures from lists of factories in the Syndicate almanacs and Verslag 1921a: Bijlage IV.)

C. OWNERSHIP OF THE FACTORIES IN THE EARLY 1880s

Around the time of the 1884 crisis family ownership of factories was still dominant. Nevertheless, although apparently simple, this concealed forms of ownership and management that had already become more complex, and would become considerably more so over the next two decades. Almost all of the sugar factories in Java were personally owned, by private individuals or groups of individuals. These owners kept as much of the after-costs proceeds as they could while paying off an acceptable amount to their financiers. Many owners were those originally allocated government-contracts during the Cultivation System, their descendants or subsequent buyers who had bought the factories from them. Other owners were the people who had set up new Free factories entirely with private capital, since about 1860 in the Principalities and from 1870 in the sugar areas of the "government lands", or who had bought from them.

A handful of men individually or partly owned about two dozen factories but, by this stage in the history of the sugar industry, it was usual for factory ownership to involve a family with direct descent or marriage connections to the original founder or subsequent owner(s).⁶⁵ Many of these owning families were descended from long-established land-owning or, more usually, land-renting individuals who had spawned interconnected Indies planter dynasties. The only significant owning companies at this time were the Rotterdam firm A. Van Hoboken & Son and the Netherlands Trading Society (*Nederlandsche Handel-Maatschappij, NHM*). The former owned seven factories, two jointly with several members of one and two families. The latter currently held complete or part ownership of four on the North Coast, but also had bought, taken over, operated and sold others in previous years. Another firm owning

⁶⁵ For a listing see Appendix 2.

two, J. Burge and E. Moorman & Co, was in liquidation but continued to operate under administration for decades until bought out by a new company in 1920⁶⁶

Factory owners were predominantly European, most with long-standing Indies histories and often Indo-European. About a sixth were owned by Chinese families, also often mixed-race. Only two, both owned by the head of the princely Mangkunegaran Solo-based dynasty, belonged to Native families.

D. THE CORPORATISING OF OWNERSHIP

In conventional accounts of the sugar industry the factories suddenly came into the hands of limited companies, this new corporatised management then being the major cause of the subsequent progress of the industry.⁶⁷ Furnivall's version of this was,

The sudden fall of prices threatened general bankruptcy. ... This crisis had far-reaching effects; it led the way, not only to better production and sounder finance, but also to a complete reorganization of the economic structure of society in Java. Before the crisis the planter was a wealthy aristocrat, the owner of his estate, and each Culture Bank was an autonomous institution. After the crisis the enterprises were reconstituted as limited companies, and the private individual owner, responsible only to himself, gave place to a salaried manager, responsible to the directors of the company. The Culture Banks continued to finance these enterprises, but, whereas their relations with them had formerly been purely commercial, now they insisted on control; from among the most competent plantation managers they selected men who could give advice not merely regarding loans, but also as to the conduct of cultivation and business.

⁶⁶ The four owned at the time by the NHM were *Kemantran, Maribaija, Tirto, Klidang* (Knight 1997: 21, fn.90).

⁶⁷ There are signs of hereditary threads involved. Furnivall's account used Helfferich 1914 as a basis; Allen and Donnithorne cited Helfferich 1918: 40-42 and Furnivall 1939: 198, then Tichelaar 1927a: 52 and Furnivall 1939: 200.

They were thus able to insist on improvements in the technique of production and on a common sales policy, and "formed the corner-stone of progress".

(Furnivall 1939: 197-9)

Furnivall also referred to improvements in irrigation, in manufacturing machinery and techniques, the founding of the Research Stations and of the General Syndicate of Sugar Manufacturers as consequences of the crisis (Furnivall 1939: 199-200).

In Allen and Donnithorne's account,

The age of the *cultuurstelsel* [cultivation system]... was followed by the age of the individual proprietors, usually men of great wealth and powerful local influence. Under their hands, and with the help of credit readily provided by the *cultuurbanken*, the industry greatly expanded its capacity and Western entrepreneurs enjoyed unexampled prosperity. This period came to an end with the collapse of sugar prices during the Great Depression of the eighties. ...

Both the individual planters and the *cultuurbanken* that financed them suffered heavy losses in consequence. The crisis of the eighties brought about a marked change in the typical undertaking. ... When the industry encountered serious difficulties which could be overcome only by heavy investment in research and in technical improvements, the older form of organisation, weakened by the depression, could not furnish the resources needed. Proprietary concerns were transformed into limited companies and some of these became linked to great financial houses in the Netherlands. Salaried employees replaced the owner-managers, and new technical and managerial methods were introduced. The financial changes in the industry's structure were accompanied by cooperation among the firms for the solution of their common problems". (Allen and

Donnithorne 1957: 83)

Allen and Donnithorne also referred to the setting up of the Research Stations, the General Syndicate, the VJSP joint selling organisation, and "other associations ... for dealing jointly with the workers and for promoting the interests of the industry in the Netherlands.

Similarly, in VanNiel's account,

The first half of the period [of the Free Enterprise System] (1870-1885) was the heyday of the private entrepreneur. The world-wide depression of prices of tropical crops forced many of these persons into bankruptcy in the 1880s. The second half of the period (1885-1900) saw the growing domination of the economy by cultivation banks and corporate management. (VanNiel 1981: 56, also reprinted in VanNiel 1992: 151)

As a final example, fromFasseur,

The Javanese sugar industry was even able to withstand the protracted economic crisis in the 1880s and 1890s. However, finance strengthened its grip on the individual sugar factories and a more modern form of organization was implemented in the sugar industry. (Fasseur (1986:140)

However, it is not so well recognised that in many cases this change was largely a change of the *legal form* of ownership, which remained essentially with the same people. In several other cases finance companies were added to the previous personal owners as share-holders in the new companies. Nevertheless, it is true that one, almost universal, component of the new managerial arrangements was the converting of a factory's legal ownership from personal into a limited liability company. The current personal owners of a factory brought it into the possession of the new company and were allocated company shares in return. This process was the corporatisation referred to by previous writers, and the basis for claiming that the "liberal" period of the industry was replaced by a corporate or "modern company" one.

These companies were set up under Dutch commercial law. Therefore, they had statutory articles of foundation, including a publicly registered name, a seat, a Board and Director(s) with specified powers and obligations, ownership of the property of the company resting in ownership of its legally issued and numbered shares, required meetings of the Board and of General Meetings of the shareholders with minutes written and stored, and Annual Reports containing prescribed minimum information and explanations of financial activities and allocations.

The seat of a company, the place of its registered office and where the Director was officially located, was chosen to be convenient for the majority of share-holders or, more especially, for those appointed to be Board Members (*Commisarisissen*) as the representatives of the shareholders. Java seats being moved to the Netherlands could indicate that influential owners had moved or that the company's shares had been taken over by one of the Netherlands-based financing companies. On the other hand, movement could indicate an administrative change to avoid double taxation, as when the NHM moved the seat of *Tersana's* owning company from Jakarta to Amsterdam in 1904-5.⁶⁸

There were mutual benefits for the continuing owners and their financiers in converting from personal to company ownership. For example, personal ownership entailed personal responsibility for any debts. Corporatising ownership insulated against this liability. A financier could locate and ensure assets more clearly and securely, arrange debt-equity exchanges through transfers of share-ownership, obtain more information about the operating of the business and establish a closer supervisory oversight by taking a position on its Board. The financier could even take over the overall management through the Directorship whilst leaving ownership with the previous owners, now shareholders. Nevertheless, although the legal reformulation of ownership did involve some formal changes in management, in many cases there were few or none that would not have occurred without it. Moreover, although legally founded, most of these limited companies were not listed on Dutch or Indies stock exchanges so their shares were not publicly traded, unlike those of the financing companies.

The newly required company Annual Reports provided more meaningful internal information about the operations and management of each factory than had

⁶⁸ Something similar appears to have been done with the company of de Groot's *Soerawinangoen*. However, the transfer of *Ketanggoean-West's* seat, at about the same time as *Tersana's*, appears to have been related to its complete take-over by the NHM. (For documentation of these three cases see the correspondence and statutes in ARA 2.02.01 NHM Inv. Nrs 12180, 11587 and 12090).

ever been made publicly available before. Information in the Reports was selected and presented by Directors, for the interest of owners concerned about their shareholdings, and for financiers concerned about loans. To make this possible, the information must be collected, recorded and analysed beforehand. In some cases, these new reporting requirements compelled the first production of data. Development of record keeping was a requirement of an acceptable corporatisation. Information about factory management personnel was usually included and presented only if considered directly relevant to financial reporting. My wide-ranging study of many Annual Reports found only references to immediate interests such as changes in the factory Administrator or problems in obtaining a satisfactory Native seasonable labour force, with perhaps a formulaic expression of gratitude to staff at the end of the report.⁶⁹

Incorporation of ownership normally involved the factory or factories owned by a family being brought into a new company, founded with the statutory purpose of owning and operating this possession. When founded the majority of new companies therefore owned only one factory, but several already owned two or three, and a few owned even more.⁷⁰ Most of the companies owning one factory used its name in their title. Those set up to own more than one are shown in the following table.⁷¹

⁶⁹ The annual company reports (*verslagen*) studied are among the items listed in section D of the Bibliography as having been consulted at the various archives, particularly the ARA, KITLV, PNRI and LIPI.

⁷⁰ The factories owned by the listed companies are listed in Appendix 4.

⁷¹ The table does not include any individual factories that were owned by members of these families but brought into other separate companies or any pairs of factories owned by a single family but brought into two separate companies. There were other Eschauzier and Etty family factories in the first category and two Lucassen family factories in the second.

Table 1. New companies originally set up to own more than one existing factory

Previous owner	No. & Location of factories	New Company ⁷²	Seat
G. Von Bultzingslöwen (died, with large debts)	5 East Java/Nth. Coast	Java Plantation Co.	Amsterdam (owned by previous financier)
Ament family	4 Near Cirebon	Aments' Sugar Factory Co.	Jakarta
Eschauzier family	4 Around Modjokerto, East Java	Sentanen-Lor, Brangkal and Dinoyo Sugar Factories Operating Co.	Den Haag
Hoevenaer family	3 North Coast	Karang Soewoeng, Adiwerna and Djatibarang Sugar Factories Operating Co.	Amsterdam
Etty family	3 East Java	Wonolongan Plantation Co.	Arnhem
Van der Broek d'Obrenan family	3 Kendal area, Nth. Coast	Kendal Sugar Factories Operating Co.	Jakarta
Dezentjé family	3 Djoengkaré, near Solo	Djoengkaré Plantation Co.	Klaten (near to factories)
Weijnschenk family	2 Near Yogyakarta	Padokan-Barongan Plantation Co.	Semarang
Rose family	2 Near Surabaya	Kremboong-Toelangan Plantation Co.	Den Haag
Loth family	2 Near Surabaya	Watoetoelis-Poppoh Plantation Co.	Den Haag
E. Moorman & Co, in liquidation from 1878	2 Near Surabaya	An appointed administration company	Surabaya
A. van Hoboken & Son, in liquidation	5 Most in East Java	De Maas Plantation Co.	Rotterdam

The figures given in this table refer to the number of factories each company owned when it was first set up. Subsequently some of these companies acquired or built more factories. In an obvious case of this, the Eschauzier family subsequently doubled the number of factories held in their several companies from five to ten, including constructing a solid ring around Modjokerto of factories which could then be serviced and managed as an integrated system.⁷³ During the 1890s Oei Tiong Ham

⁷² Only an English version of the company title is given, with "Cultuur Maatschappij" translated into "Plantation Company".

⁷³ Several members of this family were Administrators as well as part owners or renters, then full owners, of factories. Several of their factories were acquired from Chinese owners.

also started to accumulate sugar factories as part of his extensive business interests, which included sugar trading and shipping. In a first stage he acquired four widely scattered factories, one closed, by purchase or debt-redemption, then added two more just before World War I. Most were acquired from Chinese owners, including a brother-in-law. However, ownership of several of the factories was not brought into a company form for some years and an overall owning company for them was not established until the 1920s.

"Of the 185 factories in 1912, 120 belonged to limited companies established in the Netherlands, 46 to limited companies whose seats were on Java, and only 19 to private entrepreneurs, almost all of who were living on Java."⁷⁴ The majority of the new companies were family companies. However, the initial shares of others were held by other investors, such as the Java Plantation Company, the "De Maas" and "Moorman" companies, or soon taken by financing companies as repayment of debts (see section F below).

The conversion to company-ownership was eventually almost universal, but the process was neither quick nor identical in all cases. It was obviously not the only management solution to financing problems from 1884. After the crisis the majority of new factories were started by companies, but some were not. Moreover, it seems that there was no compulsion for the ownership of existing ones to be incorporated quickly. Setting up their new owning companies was done gradually over the next two decades, mostly from the early 1890s.⁷⁵ Personal ownerships were still being incorporated into limited companies well into the 1920s.⁷⁶

⁷⁴ Fasseur 1986: 140.

⁷⁵ See Appendix 3 for a dated listing of these.

⁷⁶ Probably the last, *Somobito*, owned by the Eilbracht heirs, was put into a company with most shares owned by seven family members in 1925. Two ex-Administrators were appointed to the Board and another as Director. One Eilbracht heir was the wife of the Socialist politician, Ir C G Cramer. (For more information on Cramer see Appendix 8.)

E. THE MAJOR FINANCING COMPANIES

In 1884 a little over a half of the factories were financed by consignment contracts with large financing companies, the so-called "plantation banks" (*cultuurbanken*) which specialised in the process. The others obtained funds from other banks, sugar traders and, especially the local Chinese owners, personal loans within networks of individuals. This was a long-established practice among networks of European entrepreneurs, for example in the Principalities.⁷⁷ Customarily, Europeans seemed to know very little about the financing of Chinese-owned factories. Nothing appears in the records about those whose product went directly to Chinese traders rather than through consignment-contracts with the European financiers.

Before 1884 the Dutch plantation banks were the Netherlands Trading Company (*Ned. Handel-Maatschappij, NHM*), Dorrepaal & Company, Netherlands-Indies Trading Bank (*Ned.-Indische Handelsbank, NIHB*), Amsterdam Trading Society (*Handelsvereniging 'Amsterdam', HVA*), Colonial Bank (*Koloniale Bank*);

and, with a similar financing position, the

Rotterdam International Credit and Trading Society (*Internationale Crediet- en Handelsvereniging "Rotterdam" or Internatio*).⁷⁸

After taking possession of the sugar produced by the factories with which they had consignment contracts, these financing companies sold it on to several sugar export companies, mainly non-Dutch, which knew more about and dealt with the international market.⁷⁹ By 1884 the NHM was financing thirty sugar plantations, the NIHB twenty

⁷⁷ Houben 1994: 263.

⁷⁸ For more information about these financing companies and exporters of the time see Appendix 5.

⁷⁹ For the form of a 1900 contract, translated into German, see Anlage (Appendix) A, pp.213-23 of Helfferich 1914.

nine, Dorrepaal twenty two, Internatio twelve, the Colonial Bank nine, and the HVA four.⁸⁰

The financial crisis hit them all severely. The latter five financiers survived only with additional capital borrowing and the NIHB quickly put its plantation interests into a newly capitalised daughter-company, the N-I Agricultural Company *N-I Landbouw Maatschappij, NILM*). Dorrepaal was compelled by its refinanciers (including the NHM) to reform itself into the Principalities Plantation Company *Cultuur Maatschappij der Vorstenlanden*). Annual contracts with some factories were not renewed and funding was withdrawn, especially by the revived Principalities Plantation Company which had relations with only eleven by 1888.⁸¹

Thus, from the end of the 1880s the six major financiers were the five so-called plantation banks, NHM, NILM, Principalities Plantation Company, HVA and Colonial Bank; and Internatio. In all cases, financing involved at least consignment contracts with their related factories. The financing companies' legal relationship with factory management and owners was transformed by the Royal Decree of 24 January 1886, empowering creditors to seize the standing crop, the factory, and any other provisions for producing the sugar of any debtors in a "harvest-relation" with them.⁸² When these provisions were included in consignment contracts, the financiers could exercise as much legal power over indebted factory owners as they chose to assume. Financiers could add this new power to their prior and continuing discretionary power to refuse a credit request until included into the supervisory management of the factories they financed.

It is important to recognise that not all factories experienced critical financial problems. Economic analyses of this period have been largely based on the accounts of the large financing companies and those factories taken into their possession.⁸³

⁸⁰ Helfferich 1914: 112; Furnivall 1939: 197; Van der Capellen 1941.

⁸¹ Helfferich 1914: 39, 145

⁸² *ibid.*: 44-5.

⁸³ See the sources, especially their sequentialities, underpinning Helfferich 1914, Tio Poo Tjiang 1923: 20-4, Mansvelt 1924, Furnivall 1939: 196-9, Allen and Donnithorne 1957: 83-4.

However, these factories were precisely those that had survived but were expected to make a loss or were considered unlikely to provide enough profit to be able to repay their large debts under their current financial arrangements with their financiers. At this stage of management there is no evidence of any positive enthusiasm among the financiers to become operators themselves. Therefore, it is predictable that the finance companies, as they took over ownership of loss-making or inadequately profitable factories, should show the low and inconsistent profits they experienced for the rest of the century.⁸⁴ On the other hand, many of the factories themselves were operating profitably well before then. Another likely factor for the low profits and dividends declared by financing companies that they reinvested sales income from some of their newly acquired factories, re-equipping and enlarging the plant instead of paying dividends to shareholders.⁸⁵ Unfortunately, only after the factories' ownership was put into limited companies did their balance sheets become public, available to be read now or used then in articles or summaries by contemporary reporters. Most factories did not comply until well after 1884, their internal accounting during the years before and for some years afterwards opaque to the observer. However, of the forty two factories included in an 1891 survey of company reports, thirty one were producing nett profits and paying various dividends, mostly between 5 and 7.5 per cent but with one a remarkable 18 per cent. Moreover, twenty seven of the twenty nine factories in financial relations with the NILM operated at a nett profit in 1890. This was a significant improvement from the twenty profitable factories of thirty one in both 1887 and 1888 and very different from the only nine factories of thirty one in 1886.⁸⁶

These commercial improvements appear to have occurred before much management change. Obviously, these profits were based on the cost of producing and selling the sugar being less than the prices at which it was being sold into the world

⁸⁴ As reported in Helfferich 1914: 48, 52

⁸⁵ Eg. NILM annual report 1887: 9, 1892: 6.

⁸⁶ For the survey see "Overzicht Van deresultaten der exploitatie Van eenige aan naamlooze vennootschappen toebehoorende suikerondernemingen gedurende het jaar 1891", *Soerabajasche Vereeniging Van Suikerfabriekanten* Nr. 4. 1893. For the NILM figures see its annual reports 1886: 6, 1887: 9, 1888: 9, 1890: 5.

market. Moreover, by this time any new management arrangements with financing companies (described below), new trained expertise imported from Europe, and the new collective organisation of information resources and research centres was only just or not yet been implemented. The cost prices did not start coming down consistently until into the 1890s but profits were then hit by the poor market prices in the mid-1890s. These poor prices were largely due to good harvests in Europe, which reinforces the point that only sustained reductions in production costs could give the Java industry a future.

F. THE FINANCING COMPANIES SLOWLY BECOME OWNING COMPANIES

There were differences in the time taken to become incorporated. There were also differences in the relationships developed between the new owning companies and their financing companies. In some cases, the financiers exchanged debt for equity and took on a major or minor share-owning relationship. In others, they took over ownership completely and brought the debt-laden factory into their own management structure, either absorbing it as a unit in their own company or leaving it as a nominally separate company. In the former, the financing company would take on management itself. In the latter, it might use a Java-based management company to take on the supervisory above-factory upper-middle management. In addition, several of the factories with which the financing company was in relations, having advanced consignment-contract credit, would be provided with managerial supervision and technical advice. It could be noted that this was a large step beyond the NHM's long standing demand, to have the right to veto appointments of Administrators to factories as a condition of financing⁸⁷

⁸⁷ Knight (1997: 21) reports this demand already existed by 1863.

The variety in ways factories came into the hands of financing companies is shown in the cases of *Kanigoro*, *Poerwodadie*, *Gending*, *Maron*, *Pradjekan-Tangerang*, *Bodjong* and *Kalimanah*, *Ketanggoean-West*, *Tersana*, *Kalimaro* and *Tjiledoek*, *Soerawinangoen*, and the several Deichmann and Vom Rath factories. Several inferences will be drawn from these cases here and more details provided in Appendix 6.

Some transfers of ownership from indebted individuals to new companies with some shares held by the creditor finance companies were smooth, as with *Kanigoro*'s acquisition by the Colonial Bank during 1890. The setting up of the Java Plantation Company to take over the five Von Bultzinglöwen factories also seemed problem free.

Other transfers were more complicated and extended over several years. One such case was in the hostile acquisition of *Poerwodadie* by the NHM between 1885 and 1892. The initial incorporation was substantially modified before the previous very long-time owner could be completely bought-out and excluded to allow the continuing expansion planned by the new owners. Another complex transfer was the two-stage acquisition of *Ketanggoengan-West* where an initial compulsory management take-over by the NHM was replaced by an incorporation and complete debt-equity exchange. Further possibilities, both of family complexities in the partial taking over of family concerns by financing companies and of joint ownership by these companies, is demonstrated in the related cases of neighbours *Gending* and *Maron*.

Not all the take-overs by financing companies were immediate consequences of 1884. Some were due to much later unexpected problems, as with the Birnie-related *Pradjekan-Tangerang* pair more than a decade later after losses following years of profitable activities. Moreover, notwithstanding the founding of many successful new factories, not all flourished as planned. In some cases individual entrepreneurs gained initial funding but then found more problems than expected, as happened with *Kebon Hardjo* some years later. Also, finance companies' own major involvements in setting up new factories were not always immediately successful, as with *McNeill & Company*

who were involved in the over-optimistically founded *Bodjong* and *Kalimanah* in 1891.

In trying to secure their financial interests the financing companies' assumption of ownership and management over existing factories did not have to be complete to be sufficient. A financing company could take the Directorship and a share of profits from a factory, while leaving most legal ownership with the original owners. A temporary case was the NHM's short-lived unsuccessful arrangement with the Gonsalves' *Ketanggoean-West* before it took over complete ownership in an equity-debt swap. Alternatively, it could become the dominant owner by first taking over initial shares issued in the company set up to own an indebted family factory. Then, after effectively taking over the upper management, the firm could subsequently issue and itself take up further shares to fund a major expansion, as was done with the same family's *Tersana*, *Kalimaro* and *Tjiledoek* or with *Soerawinangoen*.

Take-overs might occur immediately, over a few years, or over decades. The transfers continued into the late 1920s, the rationalising of the 1930s and, finally, occurred as part of the final scenes of the 1950s. The quickest cases occurred when a new owning company was established with its financing company specified as a foundation shareholder, perhaps taking over more of the owning-family shares later⁸⁸. Alternatively, family shares in an existing company could be bought by a financing company that had already become the factory's Director, thereby completing its control as financier, manager, and owner.

Not all changes of ownership embodied financiers taking over full or part ownership and management of an existing factory with otherwise unseizable debts. Many simply aimed to convert debt to equity in an attempt to have the factory run profitably without the debt burden, but subsequently invested in expansions. However, in some cases there were more active reasons for owners to buy another factory. Some bought a neighbouring factory to close it as a way of acquiring its government-

⁸⁸ This allocation of share-holding to the financing company could be direct or indirect, the latter by naming a company official as the nominal holder.

allocated leasing concession thereby increasing the overall scale of the continuing factory's operations. Another purpose was to increase operating scale and efficiency by adding a factory to a group, thereby providing for integration of operations or of management, sometimes with machinery transferred from the closed factory for an expansion or other improvement of continuing factory operations. Examples of expansionary take-overs of neighbours include the joint purchase and sharing of *Ngoro* between its neighbours *Seloredjo* and *Tjoekir* in 1900, the addition of the concessions of *Kalimaro* and *Tjiledoek* to *Tersana* in 1900 and 1905, *Tandjoengmodjo* and *Langsee* buying out *Klaling*'s area in 1905, *Pleret*'s absorption of *Kloerahan* in 1898, and *Kalitandjang* being bought by the NHM and added to *Soerawinangoean* in 1901. Additions to groups included those of the Eschauziers, the HVA, and Oei Tiong Ham.

G. DIFFERENT PATTERNS OF ACQUISITIONS BY DIFFERENT FINANCING COMPANIES

The major financing companies had some features in common but there were significant differences between them in their management decisions to become owning companies. All these major companies were Dutch, all had been engaged in plantation financing before the 1884 crisis. None already engaged left the business, and no more ever came into it.

The NHM expanded its ownership of factories by acquisition of complete or part ownership of existing indebted ones. Its full and part ownerships increased, from four or five to about twelve then fourteen, over two decades from 1884.⁸⁹ The company also took effective management control of several others, putting or leaving them in separate companies but, as a condition of continuing financing, demanding the

⁸⁹ The slight differences in reports may be due to use of different definitions of "ownership" and "control" in management relationships demanded between defaulting personal owners and the NHM and in relationships of mortgage or equity.

management authority of the Director's or Delegate's position for itself or for a Java-based management company and complete or part Board membership.⁹⁰ Two small factories it had owned were closed, it is not clear whether these were abandoned or their plantings merged with others nearby. The NHM itself only ever set up one other new factory, years later. Apart from this, its management schemes for production expansion were based on enlargement, amalgamation and development of its existing factories and plantations, and by agreeing to finance and provide management for other entrepreneurs to build and expand.

The HVA's move into ownership took a different path, initially similar but then diverging. Its first steps into ownership were slower and smaller. It had committed to financial relations with one factory in 1879 rising to eleven by 1891 before taking its first majority ownership of an indebted one in 1892, followed by complete ownership of four more from 1893 to 1899. Until the mid-1890s there was no apparent desire to own and operate factories. After the compulsory acquisition of the second, in 1893, it was resold but had to be taken back again almost immediately, while an unsuccessful attempt was made to quickly resell another in 1896. According to the official histories of the HVA, it was P. Reinecke, son of a founder, who became convinced that the sugar industry did have a profitable long-term future, if it was shifted to a larger scale and advanced technology was introduced. Thus the sugar industry would require much higher capitalisation. His optimism was still a minority opinion when, after heading the HVA's Surabaya office as its Representative in the Indies in 1894-5, he returned to the Netherlands to take up the Directorship left vacant by his father's death. His initial proposal to expand one of the fully owned factories was not accepted. However, after the general turn to profitability as higher sugar prices rose in 1898, a start was made on his plans. In 1901 Reinecke made a study trip to Cuba and Louisiana, which strengthened his belief that Java could match the application of big American capital in the sugar industries on the world market; by similarly modernised factories and

⁹⁰ For further information see Appendix 6.

plantations, large in scale and technologically advanced. By the late 1890s, the HVA's other Directors had been sufficiently convinced of the future profitability of large, modernised sugar factories and the company decided to invest in major expansion. The HVA developed one of its existing factories, bought another, and established new factories as the basis for its first very large and integrated plantation complex in the Kediri area.⁹¹ This commitment was massively extended again from 1905 with the start of the huge *Djatiroto* project in a previously undeveloped central region of the East Java. This was commercially attractive because in this eastern end of Java the company could obtain long term tenure of large areas of unoccupied "waste land" from the government rather than having to arrange rotating leases with prior Native land-using owners. By then, after about two and a half decades, the HVA had almost entirely stopped financing others' factories. Thus it had effectively finished playing a role as one of the original "plantation banks". In 1910 it also ceased the trading activities which had been its founding purpose. Thus, over about three decades, it had transformed itself from being a trading company to being also a plantation-financing bank, then added a plantation- and factory-operating role and finally became a purely agricultural-industrial enterprise.

In 1885 the NIHB's overall calamitous financial relations with 29 sugar factories were transferred to the NILM, a newly established and capitalised holding company for its plantation-financing interests.⁹² The NILM seemed to be managed with conservative, not expansionary, ambitions. During the decade after 1884 it took over ownership by default of nine factories, and arranged the establishment and financing of a separate operating company, the Java Plantation Company (*Javasche Cultuur Maatschappij, JCM*), to own another indebted group of five. These fourteen factories were scattered across the sugar areas of Java, apart from the Principalities. It

⁹¹ For various management-oriented accounts of these developments of the HVA see Helfferich 1914: 123, 127-8; Brand 1979; Goedhart 1999; 'Bij het Vijftig-jarig jubileum der HVA', *Indische Courant* 2/1/29: 4. Also General Syndicate factory surveys from 1896.

⁹² For details see NILM annual reports from 1885; Helfferich 1914: 72-80; General Syndicate factory surveys from 1896.

decided to re-invest profits in expansions but it was not until well into the 1890s that a generally optimistic future could be seen for its operations, and not until 1898 that all its associated factories made a profit. Nevertheless, its management neither built any more itself nor expanded its originally default-acquired possessions by positive purchase, while the related Java Plantation Company only ever expanded its initial five by one, nearly a quarter of a century later.

By the twentieth century the Colonial Bank had totally taken over in its own name only one factory but, almost entirely during the 1890s, had taken large or complete share-ownership and management control of eight more, located in different sugar areas. Like the HVA, also founded as a trading society, it had to change its statutes in 1888 to include in its aims the acquisition and operation of agricultural and industrial enterprises wholly or partly for its own account. Like the NHM and NILM, it did not significantly expand the number of holdings in its own name after this, setting up only one more factory, but financed those of others while expanding its own⁹³

The managed expansion of the revived Principalities Plantation Company took a similarly mixed course, particularly in its assuming complete or part ownerships. It owned no sugar factories of its own before the early 1890s. Then, over the twenty years from 1893 to 1912, by possession, purchase, or building, it acquired complete, major or minority ownership of fifteen factories and two cane estates.⁹⁴ The two factories it built for itself were among the last of its new possessions, and two of the only three it finally owned completely.

The other "Big Six" financier, Internatio, never completely took over, bought or built any factory of its own, but by the early twentieth century it financed about nine belonging to others and, by default, had a fifthshareholding in another.⁹⁵

⁹³ See Helfferich 1914: 166; ARA 2.20.04 Rapporten Van Bandjaratma aan het Hoofdagenschap KB 1911-13; Gedenkboek ... Koloniale Bank 1916: Van der Cappellen 1841; General Syndicate factory surveys from 1896.

⁹⁴ See annual reports (*Verlagen*) of the Cultuur Mij. der Vorstenlanden from 1888; General Syndicate handbook series of factories from 1896; Helfferich 1914: 143-159.

⁹⁵ See Appendix 6.

In the development of the industry, these financing companies evolved a majority position in the upper levels of management. By 1912, nearly two decades after the 1884 crisis, the six companies were in some sort of management relationship with about sixty per cent of the factories, one hundred and twelve of the roughly one hundred and ninety then operating. The figures are shown in the following table. Nevertheless, only fifty eight factories, under a third, were completely or partly owned by these financing companies.

Table 2. Management relations of the major finance companies with factories, 1912⁹⁶

Company	Factories			
	Fully-owned	Part-owned	Consignment Contract	Total
NHM	9	7	21	37
NILM	8	-	14	22
Princ.Plant.Co.	4	11	6	21
Colonial Bank	2	9	2	13
HVA	8	-	2	10
Internatio	-	-	9	9
All	31	27	54	112

H. UPPER MANAGEMENT

(i) Board Members

The upper management of all companies included Board Member positions . By statute, companies had to appoint Commissioners (*Commissaren*) to be members of a

⁹⁶ For all companies except Internatio see Helfferich 1914: 180. Internatio figures from company documents.

Board of general oversight and advice, particularly by discussion with the appointed executive Director(s). Their efforts were financially rewarded by a shared and recorded percentage profit share.⁹⁷ Board Members were expected to represent the interests of share-holders - some were share-holders themselves. They were nominally elected by share-holders but it seems new appointments were effectively agreed at Board level and never challenged at subsequent shareholder meetings. Any shareholder influence over appointment would have been exercised before the Board meeting at which the decision to propose would be made. No disagreements were recorded in minutes I consulted.⁹⁸

It appears that the Boards played a passive supervisory role, occasionally questioning rather than actively intervening in the formal management of the companies. This conclusion is based on consulting all the Board minutes of a variety of companies. From their formally recorded version of the meetings, it appears there were large differences between the ways these Boards functioned. Some met only for the legal minimum of one formal, minuted meeting a year, others somewhat more frequently. Some Board members attended regularly whereas others were frequently noted as sending apologies (the latter sometimes followed by a minuting of their death). The impression from all the Board minutes consulted was that management relations between Board Members and Directors were consistently one-sided, often with the former being informed of decisions the latter had already made. If the Board was given a possibility to make a decision, it would be one in which they were asked to approve a recommendation presented by a Director, sometimes argued and sometimes not. Board Members' initiatives were limited to asking for further information about something brought up by the Director. He then supplied that information and the meeting continued to the next topic. Board meetings did not take long. In one extreme example, an annual meeting was moved forward by half an hour so that one

⁹⁷ See Appendix 16, section F.

⁹⁸ The claims in this and the next paragraph are based on reading the minutes of all meetings of the Boards for *Kanigoro*, *Gending*, *Peterongan* and *Kebon Hardjo*, and general meetings of shareholders of *Kebon Hardjo*, *Peterongan* and *Tersana*.

Board Member could catch a train home but another unadvised Member arrived "on time" and missed the entire meeting.⁹⁹ The format of meetings were recorded as the Directors presenting information about the operating of the company, raising any new items or proposals they wished, and asking for the Board's approval - given in every case in every meeting noted. Shareholders were directly referred to in these meetings only when the Director(s) proposed the annual dividend to be paid, which would then be approved for recommendation to the imminent Annual General Meeting of shareholders. From companies' Board minutes, lists of industry meetings and associations involving representatives from Boards, it appears few Board members at this time had direct experience in sugar factories.

(ii) Directors

It was the Directors of the owning companies who could legally make the highest level management decisions involved in running the factories, subject to specified limits and within the approval of the Board. The scope of these decisions was laid down in the companies' founding statutes, and could reach far down in topic and detail.¹⁰⁰ They included the demanding, creating and reporting of extremely detailed information of day to day workings of many elements of the factory and plantation operations, as well as summaries of more generalised activities. Apart from major financial and some policy areas, most of the decisions were actually made nearer to the field, actually in Java. It was up to the Directors to decide where these decisions would be made. Legally, the extent of delegation was their choice.

The upper management Directors of Netherlands-seated companies were informed and advised by the middle management Administrators in Java, and any upper-middle Representatives or Agents there. It was exceptional for those managing

⁹⁹ ARA 2.20.05 Koloniale Bank Addenda. Inv.Nr. 122, Cultuur Maatschappij Gending. Notulenboek Commisarisvergaderingen, 6/6/1917vergadering.

¹⁰⁰ For an example see Appendix 7.

the local financing and administrative operations of the Netherlands-based plantation banks to have much technological expertise, or any experience in the factories or fields of the sugar industry. They relied on the recommendations of others who did. In the hierarchies of middle management, the companies' newJava-based Superintendents and technical Advisers both supervised and advised down to the Administrators of the factories owned by or related to them and also advised up to the Representatives and Agents in Jakarta, Surabaya or Semarang. For example, in making their financial decisions about the most desirable future of the unprofitable *Ketanggoean-West* and *Tersana*, the managers of the NHM office (*Factorij*) in Jakarta relied on the technical opinions of its new Superintendent of WestJava Sugar Factories, the long-experienced Administrator, S.C. van Musschenbroek. His judgments, that both factories could be developed and operated profitably after major investments and changes in administration, were followed.¹⁰¹

Management was strongly influenced by the differential limitations in internal communication. Communicating between levels of management withinJava and between Java and the Netherlands operated on different time scales. During much of this stage of the industry, non-telegraphic communication betweenJava factories or Agents and Netherlands-based Directorates took several weeks. In contrast, the railways inJava, often built with sugar industry transport very much in mind, and (at least in some seasons) the roads provided for communication between factories, Agents and Java-based Directors within days or even hours. By the late 1890s the Syndicate's list of factories included their telegraphic address, at the nearest railway station.¹⁰² Within the factory-field combinations, management communications could be completed in minutes. Therefore, all of the day to day, week by week and most of the month by month management decisions of the industry were made by managers living inJava. In companies with Netherlands-based Directorates, final annual and

¹⁰¹ Eg. *Tersana* annual report 1902, in ARA 2.20.01 NHM, Inv. Nr. 12173.

¹⁰² The NHM had used some telegraphic connections withinJava from 1860 (Knight 1997: 21, fn. 88). However, telegraphic communication was normally not confidential.

longer-term planning, including large policy decisions such as major expansion and other financing plans, could be left to decision by Director and Board. But most management activity, as with other operating activities, was reported from Java to Directors in the Netherlands. Directors then summarised and sometimes communicated decisions to Board Members, answering any further questions from them at Board Meetings. Predictions and plans for the next months and the next year, as already agreed between Administrators and Java-based Representatives, Superintendents and Advisers, were communicated up the company hierarchies. In most cases, this appears to have been for information, approval apparently assumed, rather than as awaiting decision. The technical justification of such predictions and planning, including costing, was presented as based in the technical expertise of the management in Java.

Unfortunately, there are no extant records of internal documentation from the Java-established companies, usually still largely family-owned and with Directors living in Java. Therefore, differences in their processes of management compared with companies with Directors in the Netherlands cannot now be reconstructed.

(iii) Relations between the upper managements of financing and owning companies

One approach by the management of financing companies to overseeing their investments was to exercise direct upper management control over the companies they financed by taking Director and Board Member positions. With one exception, and this not until 1901, the major financing companies did not have men with factory experience among their Directorates or on their Boards.¹⁰³ Many of the Directors of the other owning companies were ex-Administrators, in some cases of one or more of the factories owned by the company. Although these appointments involved only a minority of ex-Administrators, this pattern would have involved a large proportion of

¹⁰³ W.F. Van Heukelom (see Appendix 8).

the owning companies established in the Netherlands, and most of those established in Java. However, the lack of direct factory experience did not stop the finance companies' Directors and Board members from putting themselves into the positions and receiving fees or profit shares, of Director or Board Member of many of their companies' factory-owning subsidiaries.

This was particularly obvious in the Colonial Bank. The successive Directors of the Bank were also Directors or members of the Boards of six Bank-financed factory-owning companies, with several Bank Board members also having other such memberships.¹⁰⁴ Although the NHM also demanded representation on the Boards of owning companies which it financed, representation took more and more various and complicated forms as the affairs of the factories varied!¹⁰⁵ Upper management relations were frequently close between the NILM and the owning companies depending on it. Its Director was also Director of the Java Plantation Company, the company it had established to own several of the factories it financed. The NILM had additional representation on the latter's Board, and the NILM Representative was also its Representative on Java.¹⁰⁶ In contrast, there appeared to have been very little overlap between the Principalities Plantation Company's own Directorate and Board and those of companies it financed. The HVA, on the other hand, completely owned all of the factories it acquired or built and chose to manage them entirely from within its own corporate structure.

The large financing companies took over the upper management of several previously family-owned factories, but they were only a minority. Many of the families owning factories before their incorporation continued, not only to own them as shareholders but also to exercise upper level management by keeping family members on their Boards. Some cases involved an owning-family Director, others the hiring of an experienced man such as an ex-Administrator for this management position with family

¹⁰⁴ The Directors were on the Boards of *Gending*, *Wonosarie*, *Randoe Goenting*, *Kanigoro*, *Seloredjo* and *Pradjekan-Tangarang*.

¹⁰⁵ See Appendix 6.

¹⁰⁶ *ibid.*

as Board Members. Examples, including the deVogels', Aments' Dezentjés', Lucassen's, Weijnschencks', Eschauziers', Dingers', Broese Van Groenou and Wiesemans', Dorrepaal-Thurkows', and Hoevenaars' factories, are described below.

I. MIDDLE MANAGEMENT

While the owners and Directors were arranging and rearranging management at the upper levels of the industry, the continuing management of the physical operating of the factories and fields was being carried out by others.

(i) Above the factories

Another method of protecting finance and owning company investments was the provision of compulsory administrative, technical support and advice services to factories. Between the upper management of Directors and Boards and the middle management in the factories was a thickening upper-middle layer of Agents and Representatives, then of Superintendents and Advisers. These demanded the production of detailed operational information. Also, the financing companies could construct a strong management relationship with owning companies. They could link continued funding, or the approval of extra requests for significant re-equipping of factories, to acceptance of technical advice by the funded management at factory or company level

As well as exercising direct management authority over their owned factories, the financing companies were in formal relations of delegated authority, usually through their Java Agent or Head Agent, over the local management of several of the factories financially related to them. For example, apart from the four completely within its own company structure, in 1909 the Principalities Plantation Company was the Delegated Representative in Java for six of the eleven part-owned and Director of

the company of two more, whilst also Representing the three of the Java Sugar Company (*Java Suikermaatschappij*) directed by R.H. Erdmann, who was also on the Board of the Principalities Company!¹⁰⁷ In other cases, a separate Java-based management company would act as Representative of the Directors or as Director itself. Authority to interpret policies set by Directors included discretionary power over the continual requests from an Administrator to approve conditions and release funds for paying things like hourly or piece work labour, land leases, appointments, transport contracts, ordering minor equipment or works, fabrication or laboratory requirements, fertiliser or seedlings. If the finance or local management company were also appointed as the Director of the owning company, its management power would extend over the more major decisions of expansion, replacement, and methods of factory processing or field transport systems.

Financing companies could exercise delegated or direct power by requiring factories use their superintendence and technical services. The NILM provided technical advisory services to its own eight factories, and also to the more than a dozen others with which it had consignment contracts, including those of its related Java Plantation Company and the Hoevenaar Concern's three; the NHM advised about two dozen, including its own; the Principalities Plantation Company provided services to over a dozen, as well as its own; the Colonial Bank worked with about half a dozen factories as well as its own, from its office in Surabaya and through the 1857-established Tiedeman and Van Kerchem company in Jakarta; the non-owning Internatio provided services for about nine; the HVA serviced mostly only its own, after dropping its relations from eight to four over the 1890s.

Several established local business management companies also provided services: Kooy & Co, Surabaya, for about a dozen factories, including those of the Eschauziers with which it also had other connections; Anemaet & Co, Surabaya, for about half a dozen; Mirandolle Voûte & Co, Semarang, for half a dozen, mainly in the

¹⁰⁷ See the insert to the Company's 1909 annual report.

Principalities, including the so-called Dorrepaal factories" of the family-connected Klaten Plantation Company and its Lawoe Company offshoot; Coster Van Voorhout & Co, Surabaya, represented a couple; and, for some years, Reynst & Vinju managed a few. These local companies had a variety of long-standing personal connections with the sugar industry. G.W.J Eschauzier managed the main Surabaya office of Kooy & Co during the 1890s. His nephew, the Dutch-born and educated F.J. Gentis, took over from Eschauzier in 1897, became a partner in 1899 and, with S.E. Ramondt, a co-Director in 1908-1920. The company founder, G.W.J. Kooy, continued until 1918 to be a Director and had joined in buying a factory from its Chinese owners with four of the Eschauziers, one of whom was its Administrator at the time. Anemaet & Co had been founded by the late 1860s. The factories serviced by Coster Van Voorhout were retained after its very long-established founder, who had been the Colonial Bank's agent in Surabaya from 1881 then Chief Agent from 1883, was replaced by its Directors in 1895 and set up his own managing and trading business. Reynst & Vinju was a firm of Mr. H. 's-Jacob, part-owner of a factory and, from 1895-1903, the first Chairman of the Sugar Syndicate (see below).

Other factories were directed by Dutch or, more frequently, British sugar trading companies that had been involved in their founding and financing. These included Deichmann and Vom Rath for its two or three; with some overlapping, the British-based McNeill & Co for three and the long-present Maclaine Watson, jointly with Tiedeman & Van Kerchem, for the three put into the Kendal Plantation Company; and the major trading company Fraser, Eaton & Co, which ran its own analytic testing laboratory and exercised technical oversight over the processing in the factories with which it had relations.¹⁰⁸

It is noticeable that the Chinese-owned factories were not managed by European companies. Most stayed with obtaining finance, including consignment-contracts, from other sources, and retaining owners in their top level management. The

¹⁰⁸ For more about the Deichman & Vom Rath factories see Appendix 6. For more information about the British companies see Appendix 5.

Oei Tiong Ham factories employed separate management services. Of the eighteen Chinese-owned factories in 1908, only three had consignment-contracts with European companies, all with the HVA. However, a minority of them had appointed European Administrators (see below).

The supervisory layer of upper-middle management involved "practical men" (*practici*). The NHM had set up a supervisory layer of middle management, chosen for its experience, for its own and related factories before 1884. For example, E. Rombouts* was appointed "Inspector of the NHM sugar enterprises" in 1877, as was Jeet a few years later. S. Everts was first appointed "Head -Administrator", then "Superintendent", of the NHM factories in Central Java in the early 1880s, while T. Van der Ben*, and, from 1897, C.J. Smulders, were later appointed NHM "Superintendent" for all of their related factories across Java. In 1898 G.A. Yssel de Schepper was appointed Superintendent for the West Java factories.¹⁰⁹ All these men were ex-Administrators with wide experience in the sugar industry and most were later appointed Directors or Board Members of factory-owning companies.

The Colonial Bank's top management also decided its central administration of the sugar factories in Java should be under a "practical man" and in 1895 J. Hudig, the most senior founding Director, went to the Indies to carry out this reorganisation. The Bank's Head Agent, J.C. Coster Van Voorhout* disagreed with Hudig, resigned and was replaced by J.J. Benjamin* who transferred from the HVA. Shortly afterwards Superintendents for the Bank's coffee and sugar estates were appointed, the latter being H.W. Wegman* who had been an Administrator of the Bank's *Gending*. In the late 1890s S.C. Van Musschenbroek*, as well as being Administrator of *Tjomal*, was Superintendent of the factories in consignment relations with Internatio's Semarang Agency, and later appeared in some reports as Superintendent of the NHM's West Java factories.

¹⁰⁹ For more information about asterisked individuals see Appendix 8.

Even smaller companies with only a handful of factories appointed experienced Administrators to exercise technically knowledgeable supervisory oversight.¹¹⁰

Nevertheless, although there was this addition of an extra supervisory and advisory layer of management of Agents, Superintendents and Advisers above the factories which had not been there before, it should be recognised that this was only ever a very small and thin layer. The several companies' Agency or Representative offices employed various copy and book-keeping clerks and secretaries, office managers, errand runners, cleaners, or testing laboratory assistants, who served those few with discretionary power. However, for all companies across Java at this time, there were not more than two dozen people within this managerial layer who had any positional authority over factory operations. Most management was still in the hands of those in the operating factories and fields.

(ii) In the factories and fields

(a) Native

Most of the work, including all of the hard physical work, in sugar factories and on their plantations was done by Native workers, permanent, seasonal or casual, except for the specialised juice cooking stage which was often done by local Chinese contract teams. The direct management of this large Native workforce was performed by Native foremen (*mandurs*), who also carried out the much of the recruiting and the simple training required. In a few old photographs they can be seen, arranged standing behind or sitting in front of European employees, or simply waiting to resume their work after the photography of the Europeans in the factory or field is finished. However, they are

¹¹⁰ These included D. Jut for the factories acquired by Deichman & Vom Rath in 1895 and J. Sagers then H.C. Fraissinet as Adviser for the Kali Klaving Company directed by McNeill & Co, while Jhr. H.M.E. Van den Brandeler was Superintendent of two Chinese-owned factories in 1898. Fraissinet had also replaced the sick Sagers as Administrator of the surviving one of the Company's two factories, remaining there for two decades. Van den Brandeler, while being Superintendent of two factories later became Administrator of one of them, was also Administrator and part-owner with several Chinese of a third, and subsequently was owner-Administrator of yet another.

now mostly invisible in other records. With few exceptions, they are anonymous. Very little is known about them and their lives, how they carried out their management duties and how their local relationships were used in gaining and profiting from their positions. It is not known who they were. Presumably many came from higher levels of the local village societies and had position and influence there, but widespread use of migratory labour meant many foremen travelled with workers whose labour they provided and managed. Foremen were paid more than the workers under them, and some factory financial records show bonuses paid to them according to the number of these workers. There were hierarchies of management seniority among them, with the most senior having spent up to decades working for individual factories, but there are no records of any formal training before or during their management careers.

There are statistics still available for later periods but not for this, so the number and ranks of foremen at individual factories is unclear. Many dozen of them would have organized the permanent labourers at the quietest times of the year, rising massively for the varying casual workforce recruited to meet seasonal demands.

Their employment was mostly a matter for the Administrator, of little interest to the company management beyond the factory apart from in overall policy on wage rate limits, bonuses or other matters with direct effects on labour costs. In later periods lists of names and wages paid and, much later, proposals for pensions and career recognition awards appear occasionally in company records. However, in this stage, it appears that information about this lowest and largest category of management would normally not go outside the factory.

(b) European

The rest of the management within the factories and fields was done by a handful of European employees. During this period there were only about half a dozen to a dozen, increasing as the operations were increased in scale and technological complexity. Initially, they typically included the Administrator and a book-keeper in the office, one or perhaps two mechanics (*machinists*) in the factory, and about as many

staff supervising out in the fields much of the time. Other positions supervising operations of the weighbridge, the stores or the warehouse were also common.¹¹¹ Many tasks could have been done by Natives, but usually were not, apparently as much from European concerns about authority, trust or reliability as from technical competence in handling the written recording involved. It appears these positions were usually filled by newly arrived Dutchmen or established Indo-Europeans. Probably a few more Europeans would be employed during the months of the campaign, to supervise the casual and contract labour cutting and transporting the ripe cane, although effectively most of this management would have been done by Native foremen.

"Mechanics", "chemists" or "weighbridge supervisors" are not so obviously in managerial positions as are "field supervisors" or "fabrication chiefs", the head chemist at each factory. Nevertheless, given the organisational ethnic differentiation and relationships in which much of the work of Europeans involved directing and supervising Natives, it is appropriate to define *all* European staff as managerial. Below even the lowest European positions there were normally hierarchies of Native workers under ranks of foremen or artisans. All Europeans were thus effectively middle or lower management. There would be about as many of them as in the most senior ranks of the Native managers who, like the many times more Native foremen and artisans, worked under the supervision and management of Europeans.

All European employees were paid an agreed salary, at least comparable to those in the Netherlands and several times that paid to almost all Native employees. This was needed to attract and retain the trained recruits needed from Europe.¹¹² A newly arrived Dutchman or an elementary-schooled Indo-European in one of the lowest European positions would be paid considerably more than the most senior Native head foreman. Nevertheless, there were large differences between the wages

¹¹¹ See Appendix 14 for a description of what the positions entailed, and Appendix 15 for more detailed examples of staffing during this stage.

¹¹² This is considered further in the next chapters. For examples of wages see Appendix 16. "f." is the abbreviation for florin, another name for the guilder.

paid to Europeans in the factory hierarchy - and large differences in their bonuses. Crucially, salaries were supplemented with bonuses or shares in the annual operating profits of the factory. These could amount to quite large sums. By 1907 bonuses constituted about seven per cent of the average production cost of the NHM's eight sugar factories, while the Principalities Plantation Company paid f.44,000.¹³ The bonuses or profit shares were not standardised between factories, and were not paid to all European employees. During this period it appears that, in some cases, lower ranks and office workers were given bonuses decided by the Administrator and Director. Those below the Administrator would get only a fraction of a per cent up to about one per cent, if any. In contrast, the Administrator, in his contract, would be entitled to more, probably six to eight per cent. This effectively put him in a similar financial relation to the factory as an owner-Administrator, deriving much of his income directly from its profits. The profit-share could be at least as much as his salary (see the examples below)¹⁴.

If an Administrator's factory was operating profitably he could be enormously well rewarded and the changing from owner-Administrators to employed Administrators was not so financially significant for them. In previous accounts of the Java sugar industry it has been correctly reported that "Salaried employees replaced the owner-managers, and new technical and managerial methods were introduced"¹⁵ However, omitting discussion of the major profit-share component of the "salaried" managers' incomes gives a seriously misleading interpretation of what that meant.

¹³ Helfferich 1914: 138, 154. For further details see Appendix 3.

¹⁴ For example, around the turn of the century the Kendal Sugar Factories Operating Company paid out to the Administrator of *Gemoe* as his "percents" for 1897-1902 respectively 8500; 9600; 6800; 350; 1900 and 10,700 guilders; to the *Tjepiring* Administrator for 1898-1902 f.10,400; 17,400; 20,400; 14,400 and 15,800; while the Administrator of the *Poegoe* factory, which was closed down in 1898, received f.4000 and 10,700 in profit-share for its final two harvest years. These men's basic salaries were not given in the reports but, if normal, were probably between f.600 and 700 a month, about f.7000 to 8500 a year. (*Verslag over 1898 Van de Maatschappij tot Exploitatie der Kendalsche Suikerfabrieken*; ditto 1899-1903). For examples during a later period see Appendix 16.

¹⁵ Allen and Donnithorne (1957: 83, citing Furnivall 1939: 198).

Ethnic distinctions were basic. European middle and lower factory managements were handfuls of mainly Eurasian Indo-European, men.¹¹⁶ Either single or, often, with their Eurasian or Native wives or mistresses and children and Native servants, they worked and lived as a numerically insignificant ethnic and financial elite within the local Native society. Almost everyone these Europeans related to were non-European, and few of the Europeans were *totok*, overseas-born, Europeans. Ethnic differences in identities and lifestyles were underpinned by great differences in their financial resources, and marked in visual appearances. A limited range of costumes was associated with being European or Native, while Chinese had their own ethnic range that overlapped with the European. The languages people used were possibly simpler than the languages they understood, as there would be various competences in Javanese or Sundanese as well as Malay and various versions of Netherlands Dutch and Indies Dutch among the Eurasians, with probably lesser ability later among the *totoks* who learned the local languages later.¹¹⁷ Only exceptional Natives working in the industry would be able to speak Dutch, mostly men with local Dutch-language elementary schooling, working in the factory office, in the laboratory or as clerks elsewhere.¹¹⁸

(c) Administrators

Accounts of sweeping changes in factory administration at this time, due to appointments of professionals replacing the traditional Indies "Tempo Doeloe" (Time

¹¹⁶ As was normal among the officially European element in the total Java population and was a continuation of the earlier situations in land-leasing areas such as around Cirebon and in the Principalities. This and the later claims in the paragraph are supported by photographs (eg. in company jubilee books; Nieuwenhuys 1981); Christian birth, marriage and christening registers and other genealogical sources (eg. Christiaans 1992); previous writers on Eurasians in Indies society (eg. Houben 1992, 1994a; Taylor 1983; Bronkhorst and Wils 1996; Brugmans 1937; Locher-Scholten 1994; Maier 1993; Groeneboer 1993; Mansvelt 1932; Van der Marle 1951-2; Nordholt 1997; Van der Veur 1968b); and company pension records. The topic is considered further in subsequent chapters and in Wiseman (2000).

¹¹⁷ The versions and socio-linguistics of Indies Dutch had been little studied or reported. See Cress (1998) and Berg (1998) for a compilation and an opinion, both relatively simplified. Maier 1993 gives a wider account of changes in Dutch and Malay in the Indies.

¹¹⁸ These were termed "intellectual Natives", "educated" or "developed Natives" by Europeans.

Past or Olden Days) owner-Administrators, need some qualification!¹⁹ The common picture of wealthy owners, probably of long colonial lineage and possibly of mixed race living luxuriously in large houses by their own factories, was already out of date by the 1880s. The man living with his family in the Administrator's house was by then more likely to be a salaried employee of the owners, not a member of the owning family. Nevertheless, in the mid-1880s at least a quarter of Administrators were apparently still also owners or members of owning families, a much greater proportion among the Chinese owners. The number appears to have dropped away during the 1890s with only rare exceptions remaining in the twentieth century!²⁰

In most cases, the change was due to the owners and inheritors having moved to the Netherlands or to Java cities as rentiers. There they lived on their profits without family members working in the factories. In a few cases, the owner-Administrators were replaced when the financiers took over the factories. A small number of other ownerships were lost when small and simple factories, particularly among the Chinese-owned, were closed rather than recapitalised and expanded after the 1884 crisis.

A partial shift to appointing European Administrators is observable in the remaining ten per cent of Chinese-owned factories. Neither this change nor that in Chinese owner-Administrators was as simple or as one-directional as appears from their overall figures. On the 1908 list of one hundred and seventy seven operating factories, eighteen had Chinese-named owners, a fall of about a third since the mid-1880s. Six of the eighteen had European Administrators, including three of the four owned or represented by Oei Tiong Ham and two of the three in consignment relations with the HVA. Of this six, two had changed from Chinese to European Administrators only in the last few years, two a decade before, and two even earlier. However, among

¹¹⁹ See (eg) Nieuwenhuys 1941a, 1981 for versions of the image of TempDoeloe for Europeans in the colonial Indies towards and, in some places and aspects, after the end of the nineteenth century. Daum's mid-1880s factually-based novel *Uit de suiker in de tabak*, depicts some of the life of European plantation owner/managers in the decades until the early 1880s (see Termorhuizen 1988:208-48 for a commentary), as does to a lesser extent his later '*Ups' en 'Downs' in het Indische leven*."

¹²⁰ For a list of Administrators over this period apparently from owning families see Appendix 9.

the twelve now Chinese-administered, three had been changed from European to Chinese Administrators, including two who had bought their factories from European owner-Administrators.¹²¹

J. THE PROFESSIONALISATION OF MIDDLE MANAGEMENT

To operate and develop the plantations and factories increasing technical expertise which management needed could be obtained in several ways. It could come through employed trained staff, from outside advice, from ready access to sources of reliable information such as reviewed technical literature and from accumulating experience. Because these developments of Java management involved several elements of the colonial situation, they can be considered as examples of the issues of imperial technology transfer.¹²²

(i) Late Dutch industrialisation

In several ways relevant to the sugar industry, Dutch society had become relatively backward and derivative during much of the nineteenth century!¹²³ Its long-existing textile and fishing industries had been modernised using British and French models and expertise; the machinery design for the Java cane industry, the development of the Dutch sugar beet industry, and other science and technology came from Germany,

¹²¹ See HCHO 1888 and the 1896, 1899, 1904 and 1908 issues of the General Syndicate factory survey.

¹²² There is a large literature on this; for example, Headrick 1988 (especially chap 7) for wide-ranging accounts, McLeod and Kumar 1995 (especially Kumar 1995) for British India, and Cummings (1974) for agrarian technology.

¹²³ The claims in this paragraph are supported by "A Fierce Battle" 1964: 2; Alberts et al 1988: 79; Bos 1982; Claver 1995: 18-27; Kossmann 1978: 415-6; Lambert 1971; Noorem and Jansen 1983: 36-8. The late expansion of Dutch cities can be seen from the detailed official maps of each of the Provinces published in the late 1860s (eg. see Kuypers 1987, a reprint of the South Holland Province maps).

Britain, France and the United States - although science was developed fast in Dutch university reforms during the late nineteenth century!¹²⁴ This latter was one element in the relatively late but rapid industrialisation and modernisation of Dutch society in the last two decades of the nineteenth century. Not until well into the second half of the century did the new industrial and residential building of older Dutch cities expand beyond the limits of their earlier fortifications. The new harbour facilities at Rotterdam and Amsterdam provided for some restoration of the earlier Dutch maritime trading strength of the seventeenth and early eighteenth centuries. As in other Western economies, private personal industrial ownerships began to be converted into public limited companies in the late nineteenth century in the Netherlands. The Java sugar industry was, therefore, only one stream of a wider movement. Overall, Dutch society, its economy and its technology were relatively late in modernising and industrialising, and the change coincided with the Java sugar industry's management responses to the 1884 crisis.

(ii) Learning from training

In 1884 very little trained expertise was available for employment in and by management of the Java sugar industry. No appropriate technical or scientific training facilities existed in the colonised Indies, meaning any necessary trained experts must be imported. Interestingly, twenty years later in 1903 the Royal Mail Shipping Company, which was facing problems in obtaining trained employees tried setting up a marine training school at Jakarta but failed to attract enough interested Native, European or Indo-European applicants. The conventional explanation was: "our Indo-Europeans still preferred a clerk's desk than a career through which an honourable position could be earned from hard work".¹²⁵ The Company subsequently declined to contribute to

¹²⁴ For example at the Leiden State University (Hoopetec 1962).

¹²⁵ *Á Campo* 1992: 516-7.

the setting up of a proposed seaman's course at the government's trade school in Jakarta, but subsidised institutions in the Netherlands.

More significantly, relevant training was unavailable in the colonising Netherlands. No specialised training for the modernising sugar industry was provided there until the mid-1890s. A few Dutchmen with sufficient money and education studied at one of the two German sugar schools (Berlin since 1867 and Brunswick since 1872). Once trained, the Dutch sugar beet industry competed with the Java sugar cane industry as a career choice.¹²⁶ Machinery for the Java factories was imported from Europe, very little of it Dutch technology.¹²⁷ Some expert employees could have been imported with the equipment delivered from its manufacturers, a recognised, long-standing practice. Skilled French staff had been imported to erect and operate the new French-built equipment for Th. Lucassen's factory fifty years previously, and there were tales many years later that, during the last years of the Cultivation System, "foreign *monteurs*" were sent out by the machine factories "as Dutch and Natives did not like to get their hands dirty".¹²⁸ Some of those who set up new equipment, or even new factories, continued to be skilled *monteurs* employed by the supplier, the supplier's technical agent providing further advice where necessary!¹²⁹ Nevertheless, this was certainly not always the case. In 1889 J.F.W. Van Vloten*¹³⁰, newly employed as a young book-keeper but with higher agricultural training, had to help the mechanic, a "simple workman" who could not read technical drawings, to set up the equipment for a complete new factory which had been delivered from the local agent.

¹²⁶ Leidelmeijer 1997: 234. For two accounts of the development of the Dutch beet-sugar industry until 1919, in general and in terms of a single factory respectively, see Bakker 1989 and Claver 1995.

¹²⁷ As is evident from the lists of machinery reported from each factory in the Syndicate's regular surveys from 1895. Only an occasional item from Stork or Werkspoor or Van Vlissingen appears among the German, English or French-sourced technology for many years.

¹²⁸ For the Lucassen case see Leidelmeijer 1997: 162-3, for the reminiscing see Bley 1927.

¹²⁹ As the crisis of the 1930s started to grip, an ex-sugar mechanic now a travelling *monteur* sadly compared his situation with that of a European employee in a sugar factory *Monteur*, "Werkloosheid en een uitzonderlijke positie", *De Suikerbond* 1931: 1017).

¹³⁰ For further information on Van Vloten, as well as other asterisked individuals, see Appendix 8.

There was no trained technical expertise beyond the simple artisan levels among the Native employees. None was provided on Java and managements showed no noticeable interest in providing any. The Javanese, Sundanese and Madurese were not educated in technology. Nor were most taught Dutch, a prerequisite for any administrative position in the industry. The few high Native officials' sons, who were better educated could have expected to succeed their fathers or otherwise move into government service, not to work in a sugar factory or plantation. The expertise of the Chinese "sugar cookers" of the crushed-cane juice was transmitted informally within their own hierarchical teams.

Relatively little of the technical expertise in European employees was grounded in initial formal training. There was almost nowhere in the colonised Indies to obtain training during these decades. Lower mechanic training became available at the Dutch-language *Surabaya Civic Evening School*, but this was not established until the end of the century. This school was associated with the upper academic secondary school in Surabaya and, at least in its early years, the same person was director of both. Fifty years later, it was reported by Furnivall to have been set up to meet the requirements of the sugar industry. It aimed to teach "mechanical and civil engineering", to Europeans who had successfully completed Dutch-language elementary schooling and thereby had obtained the European Lower School Diploma. By 1900 this School already had over two hundred and fifty students.¹³¹ In 1901 the Queen Wilhemina School was opened in Jakarta, the first full secondary technical school in the Indies with five-year post-ELS schooling for mechanical or building supervisors. The first regulations for a State certificate as a mechanic, gazetted in 1908, granted status for its theoretical component if the applicant already had a diploma from one of these two Java schools. The only other relevant, but very limited, training was offered by charitable institutions for "Europeans". In practice, these educated Indo-Europeans, particularly the "Indos", those of the "lowest class in Indo-European society", and had

¹³¹ Furnivall 1939: 37.

been set up to quell the increasing concern about the developing mixed-race pauper class. These institutions were: from 1886, a trade school in Jakarta later taken over by the government; from 1887, social-educational foundations in Semarang and Bandung; from 1892, a trade school in Semarang; and, from 1896, another school in Magelang.¹³² There is no evidence that they were seriously used by management for adequate technical skill formation.

Recruiting in both Europe and the Indies produced a colonial dual labour market. Typical of a classic colonial relationship, management relied on formal training in the colonising metropolitan Netherlands. However, owing to the late modernisation of that country, not much was provided there either. From the beginning of the 1880s, formal training as a mechanic after lower secondary schooling was available in the Netherlands through one institution, the *Amsterdam Training School for Mechanics*.¹³³ Some other mechanics gained their skills through experience and some through in-house training in the merchant and military marine.

At that time the most advanced engineering and agricultural science training in the Netherlands was provided by two separate institutions; the *Delft Higher Technical School*, evolved from the military engineering school founded in 1842, taught civil engineering, and the *Wageningen State Higher Agricultural, Field and Forestry School*, which was only recently founded and in the 1890s was still evolving to higher post-school levels, taught agricultural technology. Both were fee-paying and required prior five-year academic secondary schooling (*Hogere Burgerschool, HBS*) in the Netherlands or the Indies. Only in 1896, after requests from some of those with interests in the Indies, was a one-year continuation course in Indies' agricultures introduced at Wageningen, as an appendix to its basic three-year course.

¹³² For the last, 'Pa' Van derStuer's orphanage and training institution, see Van derVeur 1955: 64-5.

¹³³ This had been founded in 1878, privately but with assistance from the city government, subsequently gradually extending its provisions to prepare technicians and changing its name to the Amsterdam Technical School in 1901. (See obituary of J WVisser, founding committee member and director in *Archief Bijblad* 1907: 432-3).

The first Dutch general training specifically for the sugar industry was not set up until 1895. The private *Amsterdam School for the Sugar Industry*, founded in response to complaints about the need for Dutchmen to study in Germany or elsewhere, was to be a major contributor to training for the Java sugar industry. In 1893 the first issue of the Java industry's *Archief* (see later) included an article about "Schools for the Sugar Industry", translated and reprinted from the *Louisiana Planter*, with a following comment drawing attention to the report that there were such schools in Germany, Belgium and France but not in the Netherlands. Moreover, in 1892 one German school had seventy students, eighteen of whom were German but thirty six were from the Netherlands or the Netherlands Indies! It was commented, not entirely accurately, "We don't have one but Belgium and Germany, both countries without colonies, have schools for the sugar industry!"¹³⁴ Shortly after this the first Dutch sugar school, the private Amsterdam School for the Sugar Industry, was set up. An article in the *Archief* in 1895 advertised the 1895-6 courses of this school. The with directors Dr. G. Houdius Boldingh and Dr. J.K. Van der Heide provided courses on sugar fabrication, sugar analysis, cultivation and plant diseases, steam and steam-machinery, and botany. Their curriculum followed the existing German model, training mainly secondary school graduates for the newly established chemist or chief chemist (*fabrication-chef*) positions and was tied to the annual harvesting and processing period (*campagne*) in Dutch or German sugar beet factories. Initially, the School was claimed to be for those from technical, agricultural or upper secondary schools but later it was accepted that lower secondary was usually the minimum requirement. At first its courses ran for less than a year, including experience in a campaign, later they were extended, providing the opportunity for successive courses accumulating to about two and a half years and including two campaigns.

There was no formal training for employment in the field management positions. Some employees started directly in these, untrained but often with previous

¹³⁴ "Scholen voor de Suikerindustrie", *Archief* 1893: 20-21.

experience in other plantations. Others, with prior technical training and ambition who had been working up within the mechanic or chemist factory positions, transferred to the bottom of the field employee hierarchy. Although initially dropping some salary, this was the only way up to the highest levels and profit shares of the, second-in-charge, First Employee and Administrator positions.

At this stage trained Europeans usually entered the industry at the lowest European management level, and gaining some experience, moved quickly up the management ranks in the same or another factory. Often, but not always, the untrained rose more slowly if at all, although smaller factories with their rented fields had so few European management positions there was little opportunity to progress. There are several examples of the relatively few trained individuals being appointed to higher middle management positions in the factories. However, as there were usually so few European positions, hierarchies were less clear than in the later periods, and those already in the lowest positions were likely to have little schooling and be quite untrained in the technologies being introduced through new equipment and processes. Moving up in the management hierarchy at this stage did not require further inservice training, only satisfactorily assessed experience and reputation. There was no formal inservice training provided, or apparently demanded by employer or employee at this time. Some informal cases existed. The EastJava Research Station at Pasuruan (see below) started chemical analysis classes, other Research Stations provided limited scientific work-experience during the quiet season between campaigns, and work-experience and modelling was provided at *Tjomal* under Van Musschenbroek*. Nevertheless, these were exceptional and minor cases.

After 1884 financing and managing companies began to introduce more advanced technologies but they were not the first to use imported trained employees.¹³⁵ A decade previously they had been preceded by the innovatory scientific approaches of exceptional individuals such as VanMusschenbroek* and Van

¹³⁵ But see earlier cases by individual factories cited in Knight 1997.

Heukelom*. These two men had come into the sugar industry with family connections and initial partial higher technological training in Europe then, after they became Administrators, had carried out local trialling of locally-based technological developments to add to the overseas-sourced technologies imported into the Java industry. The NILM appears to have been among the earliest of the major companies to recognise the potential advantages of increased technical expertise among its management employees and do something about it. In 1886 it employed the European-trained and experienced E. Kersten* as a Technical Adviser. In 1889 it recruited three engineers, among them Ir. (Engineer) B.M.A. Carp* who had graduated from the Delft Higher Technical School, the most advanced level of technological training provided in the Netherlands, and sent them out on three year contracts to head factory operations as Fabrication Chiefs. By the early 1890s the NILM had a Technical Adviser, H.C. Pennink, who was writing articles in the Surabaya Association's Circulars (see below) advocating the advantages of changing to the diffusion methods of juice extraction, justifying this with statistics of processing and costs from two factories. In the early 1890s the Colonial Bank employed the technically trained and experienced W. De Waard* as Technical Adviser of its own and related factories.

Also, several years after 1884, factory managements were infiltrated by some well-trained Europeans, recruited at the end of the 1880s and in the 1890s, who moved up to Administrator level within a few years. These included R.J. Bouricius* and J.F.W. Van Vloten*, with diplomas from the newly upgraded Wageningen Higher School, and the Amsterdam Mechanics School-trained H.C. Fabri*, J.F.A.C. Van Moll*, and J.J. Nederburgh*. Other men, such as J. Dólleman*, with no initial special training might work in Java for some initial experience and, possibly, to test their interest in the industry, then return for further study in Europe before returning to Java and working up the ladder.

Nevertheless, it appears that these were exceptional cases in the nineteenth century. The comments "the first" or "one of the first" were frequently applied to trained expertise in the 1880s and 1890s. Even if exaggerated, these comments indicate

they were remarkable, and not part of an unremarkable flow. In at least some cases there would be no middle or lower management employees with any prior training working in a factory or its fields. For example, in 1905 the relatively small *Tandjong Tirta* factory employed eleven Europeans: one with education equivalent to 3-year academic secondary schooling and all others with only lower schooling, including several not having completed 6-year elementary schooling.¹³⁶ Any graduates from the Amsterdam Training School reaching Java in the 1880s were very young men embarking the several years of experience which was required before promotion to Administrator. Few were being produced by Wageningen, and no-one could have graduated from the Amsterdam Sugar School before the late 1890s.

(c) Learning from experience

A new European employee with prior training might be preferred for initial employment, but subsequent promotion required satisfactory assessment and experience in carrying out the duties of a sequence of positions. By the time an employee had worked up to Administrator, his expertise had been demonstrated through this experience. The accepted expertise for authoritative oversight was based on the experience of a previous successful career, not on recently gained formal qualifications. These qualifications could be more appropriate in an Adviser which, but appropriate working experience would still be required. During these decades, most management expertise was gained from experience. They learned their skills while on or near the job they were in, not formally or prior to employment. Management employees reached the higher ranks by working their way up through lower ones. Of course if they already had prior training, their promotions would be much quicker, but they would not be placed at the top. In this, they differed from some of those already at the top by the early 1880s. Most existing Administrators would have been appointed when the European staff was so small that someone with general administrative or

¹³⁶*Gedenkboek ... "Tandjong Tirta" 1905-1930: 44.*

management experience in the civil, military or marine services could adequately manage the half a dozen men involved. These subordinate managers would have learned from experience to supervise the relatively unsophisticated operating of the machinery in the factory, or the planting, cultivating and harvesting activities in the fields, or to do the accounts.

By the early 1880s there was not time for Administrators to have trained at the post-1878 Amsterdam Mechanics School, graduated in their late teens and then gained adequate experience and authority in a sugar factory. But there would have been time for men with experience and possibly some training working with the relatively new steam machinery in ships to have become old enough for acceptable authority in the colonial situation. Much later, there were retrospective claims about "ex-sea captains" as Administrators but the number of these was probably more limited than suggested. Some exaggeration may have been involved, the normal context for such claims being a demonstration of the training currently involved for European employees by a dramatic comparison with the past. Perhaps more indicative of the actual situation is the 1890-1913 list of captains of all the ships of the Royal Mail Shipping Company. This was the dominant inter-island steamship company from 1890 and thus the line with the closest physical and social contact with the Indies.¹³⁷ Not one of the names on the Shipping Company's list also occurs on the list I compiled of about nine hundred Administrators. Furthermore, the family names on the captains list do not overlap with those of the Administrators list, which includes a large number of "Old Indies" family names.¹³⁸ A more likely progression would appear to be from a ship's *snechanic* to a sugar mechanic, or from a middle ship's officer into factory management, then up the hierarchy, rather than from a marine career until captaincy then transferring directly to be a factory Administrator.

¹³⁷ Á Campo 1992: 704-7, Bylagen, Lijst 7.

¹³⁸ Eg. see the multi-volume listing of gravestone inscriptions in European cemeteries across Java by Bloys Van Treslong Prins 1936-9.

Probably several Administrators learned their skills from the experience of growing up in a sugar-related family. This might be a father who worked in a factory, was a member of a family which owned one, or who worked or was related to someone who worked on a plantation in a managerial role. It could also have come through a family in government positions. Although the close connections between government officials and private profits of the sugar industry's Cultivation System were largely in the past, there were still families with interests in both. An example is the case of the *Srogol* factory, one of the possessions of the family of the ex-Governor General Van den Bosch. Rice, coffee and sugar were grown on their private land concessions in the Priangan hills, in WestJava. From the mid-nineteenth century the family business was directed by various Van denBosch family members, when not holding civil or military government positions. In 1887, as a response to the government's changing of some private lands into government lands during the 1880s, the family business was converted into a limited company, thePondok-Gendeh Plantation Company. An associated careful examination and review of the Company's various activities was carried out by a Van denBosch, a second Director, and J.H.W. Graaf Van den Bosch, at that time the Assistant-Resident of Ambarawa. It was decided to close the *Srogol* sugar factory, partly because it was deemed to be at too high an altitude, to build tea, coffee and kina processing facilities on its site, and use some of its plantation land for supplying sereh-free cane seedlings to factory plantations in Middle and East Java. Later, the within-family advisory Assistant-Resident was appointed Administrator of *Bandjardarwa*.¹³⁹

Training was not a prerequisite for Administrators' managerial pro-activeness. There were certainly a small handful of noted Administrators who had overseas training prior to their beginning in sugar. There were also many other progressive Administrators without the same level of training who carried out and supported agricultural trials inJava, by themselves or by cooperative efforts with the handfuls of

¹³⁹ *Gedenkboek Cultuur-Maatschappij "Pondok-Gendeh" 1887-1912.*

researchers employed in the Research Stations from the late 1880s (see below). By 1900, some factories were planting up to a dozen different varieties in trials. Results were reported, noted and utilised. This can be seen in the annual reports of the NILM and other companies where the bases for some planned implementations were cited in reports from Administrators to Directors, or in annual planting descriptions which included the areas under different varieties.

K. THE COLLECTIVE ORGANISING OF MANAGEMENT

During this time management, mainly in the persons of factory Administrators and company Agents, organised itself more collectively to combine and create resources for their interests, against sereh disease, against the government, and for productivity.

(i) Regional organising

Since the start of the Cultivation System in the 1830s owners had been meeting informally over their mutual interests. Their sugar interests meshed with their business, social and family relationships. For example,

Even before, but above all, after 1830 a community of planters developed in Central Java. They were bound together by mutual interests, and also by family ties, reciprocal suretyships and debt obligations. Personal connections with influential officials and Government contractors outside the Principalities also existed. The leaseholders formed a strong counterbalance to the Resident, who could do little to subject their activities to an effective supervision. Should indeed he attempt to do this, the leaseholders set in motion an attempt, at times successful, to rid themselves of such an overzealous official. However, the Resident's influence was strong when the Government's policy towards the leasing of land was at issue. ... The Resident, who had to implement the various

regulations in practice, had only limited means of enforcement and was placed ... in opposition to a closely organized group of businessmen. (Houben 1994a: 303-4)

Occasionally, more formal short-term groupings were set up for particular purposes. An early example had been the 1859 formation by owners of a temporary association. Its sixty three members voted unanimously to lobby the government to reverse its decision and re-open and extend the Cultivation contract system.¹⁴⁰ In the early 1880s, thus before the "crisis", a network of more formalised associations of Administrators and owners had been started within the government's regional Residency system in the Cirebon, Yogyakarta, Japara, Pekalongan, Probolinggo, Surabaya, and Tegal Residencies. Among these, the Japara Association of Sugar Manufacturers had been started in 1880 and received government approval in 1881, and the corresponding Surabaya Association of Sugar Manufacturers was underway by 1883. These Associations had formal structures, memberships, office-holders, subscriptions and were registered by the government and published detailed records of their meetings in their regular bulletins to members and other subscribers. They also reported some data about the operations of factories in these bulletins. They elicited and collected the data from among their own members and also reported some of the information made public in the annual reports, recently made a legal requirement of the newly-formed owning companies.

A major function of the Associations was to coordinate managements' lobbying of government to support sugar industry interests. These were primarily financial interests, including favourable taxation, duties, railway charges, subsidies, or various combinations of these.¹⁴¹ Others related to government policies that threatened to limit

¹⁴⁰ See *Verlag der Voorlopige Werkzaamheden voor de Algemeene Vergadering Van Suikerfabrikanten, Semarang, 23.9.1859.*

¹⁴¹ Eg. in 1886 from, inter alia, eight Associations (*Nota over de suikerindustrie op Java, en de maatregelen die ter harer instandhouding vereischt worden, aan de Tweede Kamer der Staten General, 30.11.1886*), and in 1890 ("to his Majesty the King") from the six owners or Administrators holding office in the Djokja Association.

management freedom, on the grounds of equipment safety or protecting Native interests in land-leasing arrangements. Expressions of concern about the latter were raised through the 1890s, before the new regulations about longer leases and limits on maximum plantings gazetted in 1895 and 1899. They included concerns expressed within the industry that some activities of Chinese and locally wealthy Natives were deemed disadvantageous to the general population as well as to the industry. The new regulations were apparently accepted, even approved, in the industry (see later). Central organising of management also provided structures and collective resources which enabled the industry to investigate, debate and establish a common management position on topical issues, such as the government's imposing a labour-controlling Coolie Ordinance. These Associations were the basis for founding, first, the industry's Research Stations and, later, the overall General Syndicate (see below).

(ii) Java-wide organising

The early coordinating of management across Java seems to have been provoked by the eastward spread of sereh. Apparently the first significant and broadly attended meeting of "sugar manufacturers and interest-holders in the Java sugar industry" was held in April 1888, in Semarang. Its purpose was to provide an opportunity for public debate about the sereh problem, sharing and disputing the latest experiences, findings and opinions, including the restrictions on exporting seedlings between Residencies. Clearly, the latter involved airing of disputes between representatives from West Java, which was most affected, and others. Offers to help pay for further trials and seedling plantings in sereh-free areas, including in Borneo, were made on behalf of the NHM, the NILM and Internatio, while large prizes were offered for studies of the disease. Individual contributions to these discussions were noted in detail, and published.¹⁴² Another meeting was held the next year for further discussions. This time they

¹⁴² *Verslag Van het op de Vergadering Van Suikerfabrikanten en belanghebben bij de Suikerindustrie op Java to Semarang op den 25 April 1888 verhandelde.*

discussed the Surabaya Association's agreement to a proposal from P. Eschauzier, a factory-holder in East Java, that the spread of sereh from West to East Java should be halted by banning new cane planting in the central Madiun area, warning the government of the danger of exporting any cane from West to East, compensating the five Madiun factories, and supplying them with healthy cane from others within the so-far disease-free furthest East Java. These proposals were not put into practice. Nevertheless, the concerns raised in the discussion about funding, non-support and cases of exploitation of free transport provisions indicated the industry's need for a collective management organisation, with authority for majority decisions.⁴³

In 1893 the Surabaya Association organised the First Sugar Congress in Surabaya, to continue sharing the new expertise that was becoming available from collective efforts. Apart from the 1888 anti-sereh meeting, this was effectively management's first formal technical meeting for the whole of the Java industry. Its program involved presentations on state of the art knowledge, about half each by experts from the Research Stations and Administrators.

It is interesting to note that, even before the founding of the Syndicate, there were hints of what would be a major trend later. In 1893 several Administrators complained that the meetings of the Surabaya Association were difficult for Administrators to get to, so were attended mainly by non-Administrators. One proposed that meetings could be held at Modjokerto, a sugar centre south-east of Surabaya, which would benefit seventeen sugar manufacturers, whereas holding them in the port city Surabaya was of benefit to only some trading bodies. Alternatively, if meetings were held in the mornings the Administrators would have time to get back, rather than needing costly stays in Surabaya. The Chairman was willing to open up this matter for discussion, saying that the Administrative Committee was controlled by the wishes of the majority of its members. But, he pointed out, all of the current

¹⁴³ *Vergadering der Soerabaische Vereeniging Van Suiker-fabrikanten*, 15/1/1889. In an interesting indication of colonial assumptions a transport certificating system was proposed with fines for European offenders but prison for Chinese or Native.

members of the Committee chosen by the members of the Syndicate worked in Surabaya, meetings in Modjokerto would be more difficult for the Administrators in the south of the region, and many Administrators already came in to Surabaya for other work, committees, visits to suppliers, discussions with their money-lenders, and similar.¹⁴⁴

The Java-wide management organisation followed from a recognition that the major concerns emerging from the regional management Associations' were industry-wide. By 1895, apparently with no objections from regional Associations, their organisational coordinating roles were amalgamated into a single General Syndicate of Java Sugar Manufacturers (*Algemeen Syndicaat Van Suikerfabrikanten op Java*).¹⁴⁵ This became the middle managements' central organising, representing and lobbying body. The German precedent was referred to in discussions. The new Syndicate added industry-wide coordination to the existing, locally-operating, Associations, which effectively continued as the new "Departments" of the Syndicate and maintained their own office-holding structures. With the Departments as its components, a new representative committee and a management committee with a salaried part-time executive group were added at the top. The Syndicate's division into Residency-defined Departments and central management continued to follow and support the dividing of the colonial State into Residency and central administrations - except that the central government was based in Jakarta and Bandung whereas, for all but a few years of its existence, the central Syndicate and its staff were based in Surabaya.

The Syndicate, formed by and largely comprising Administrators, reflected its origins in its three categories of membership: "Ordinary Members" were the factories, represented by their Administrators; "Extraordinary Members" were mainly commercially-connected individuals, including Agents of the main management

¹⁴⁴ *Circulaires der Soerabajasche Vereeniging Van Suikerfabrikanten* 1893 (Nr. 7): 158

¹⁴⁵ For founding organisation see the General Syndicate's 1895 Statutes and Regulations and, for the first few years, *Handeling Van her Derde Congres Van het Algemeen Syndicaat Van Suikerfabrikanten op Java, gehouden te Bandoeng op 6, 7 en 8 Maart 1899*: 1-5. (Later "op Java" was replaced with "in Ned.-Indië".)

companies; and there were individual 'Introducées'. The central Syndicate did not hold general meetings of members. Meetings were organised as regional Departmental meetings. The Syndicate never had many paid staff, in fact for the first decade there was only a Chairman, Vice-Chairman and Secretary with one or two secretaries for clerical support, all part-time. After about ten years, a Second Secretary and a few more office staff, mainly Indonesian, had been added, with the Secretary becoming also the Office Chief. From 1895-1903 the first Chairman was the Surabaya lawyer-businessman Mr. H. 's-Jacob* and the influential North Coast Administrator, S.C. Van Musschenbroek* was the Vice-Chair.¹⁴⁶ In 1903-7 the latter became the second Chairman, while continuing as Administrator of *Tjomal*, Internatio Superintendent and NHM Superintendent for its West Java factories. His Vice-Chairman was another Surabaya-based lawyer, Mr. J.W. Ramaer. Van Musschenbroek's term was the only time the Syndicate Chairman was either an Administrator or had other direct factory experience. This also applied to the Syndicate Secretary, J.F.A.C. VanMoll*. He had been working in a factory and was transferred to *Tjomal* for this period. He was later appointed elsewhere as an Administrator himself.

The overwhelming majority of the non-Chinese-owned factories associated themselves with the Syndicate, and most factories supplied information to it on request. By 1899 129 were paying members, and 175 were providing internal technical information for publication in response to its surveys. After a few years most had joined.

Although active and prominent, as intended, the Syndicate was only a resource of the middle managements of the industry. It coordinated their organisation on a Java-wide basis; elicited, collected and analysed information from and relevant to them; lobbied the government continually on matters of their general interest; and publicly spoke as their collective representative. Initially, it supplemented the self-interested activities of the regional associations then partly subsumed and partly extended them

¹⁴⁶ For more information on all asterisked individuals see Appendix 8.

into industry-level concerns. Individual Administrators' political concerns were concentrated on more local issues and the local application of general policies, whereas the larger companies' concerns were more about those general policies. By drawing on its component Departments and the associated Research Stations (see below), the Syndicate could marshal a powerful range of resources, ranging from more local knowledge, experience and opinion to more general expertise at the most advanced technical level. These resources could be combined with others: legal and other cultural skills to construct documents and speeches in Dutch; personal (including ethnic) attributes needed to use them to lobby government officials; financial resources to employ further legal opinions if wanted; and social acceptability among influential businessmen and members of government. These resources gave the Syndicate potentially powerful influence in the interests of the middle managements of the sugar producing companies.

Nevertheless, the Syndicate did not ever have direct management authority within the industry itself and had only delegated authority outside it. Formed and based in Java, as the first collective organisation of the entire, industry-wide, European management of the Java sugar industry it acted as the single representative - the public face and voice - of that industry. It operated as a collective agent of the managements, companies, owners, Agents and Administrators, who chose to support it and who gained from its benefits. The economic significance of the sugar plantations and factories at the local, regional and Java levels of the colonial Indies society gave political power to their collective organisation. But the Syndicate remained a voluntary association, having no internal powers to enforce any managerial controls over any of its members. It provided a network and arena for the collection, selection and production of information, which could then be used by the managements of the industry internally or externally. Operating in Java, it was a colonial organisation. All who presented and made decisions were Europeans, Dutch was the language of their business and most important information was written down.

L. COLLECTIVE MIDDLE MANAGEMENT AND TECHNOLOGICAL INNOVATION

(i) Applied Research

Collective organisation of Research Stations clearly preceded that of the Syndicate. A decade *before* the establishment of the central Syndicate, the first sustained collective actions by middle managements in response to the 1884 crisis organised regional research centres to combat sereh in particular, and to increase productivity in general. Research centres were founded through regional groupings of the existing Residency Associations, which enabled them to provide better for the variation of conditions across the sugar areas. They were funded by factory owners on the basis of planted area, the government having refused sporadic requests for any funding three times by 1904.

Efforts to establish and manage the three Research Stations came mainly from Administrators, with some assistance from financing companies.¹⁴⁷ The factories' payments to the Stations had to be approved by their companies' Directors, or representative of the owners if not yet incorporated. Notably, the West Java research centre, originally intended for Surabaya but then set up further south using cheaper extensive land and existing buildings at coastal Pasuruan, received f.10,000 in voluntary donations, mostly from companies, in addition to the prescribed funding from factories.¹⁴⁸ Sugar research centres were initially proposed a few years earlier by Dr Sollewijn Gelpke, then Chief Inspector of Agriculture. Following existing models in Europe, the actual practical discussions, decisions and commitment of funds for the centres were, in the end, carried out quite rapidly. Annual reports show that the

¹⁴⁷ Official accounts refer to owner-Administrators G.M. Zuur, Th. Gonsalves, D. Lucassen, the Administrator S.C. Van Musschenbroek and S. Everts, the Superintendent of the NHM's sugar factories for the West Java centre; with D. Jut, P. Eschauzier, J.P. Moquette, S.A. Arendsen Hein and Mr. H. 's-Jacob for the East Java centre.

¹⁴⁸ The donations were from the NILM, Fraser Eaton & Co, Van Dalen & Co, the Colonial Bank, Internatio and G. Lebret, involved in the ownership of several factories.

centres' Boards of Management remained largely in the hands of mixtures of owner-Administrators and employed Administrators. This gradually changed but, as an early director of one of the Stations reminisced about fifty years later:

the management members of the station were then no chiefs of trading houses or legally educated chairmen and secretaries of producers' associations in the capitals, but planters and manufacturers in the immediate neighbourhood of the research stations, who through their daily intercourse with and to the people tied in with the institutions could make known their wants and needs. The daily conversations of practical men and specialists, whereof most were still of foreign background, these regular exchange of ideas, worked so fruitfully on the communal work for the needs of the Java sugar industry, that the most beautiful results were thereby harvested. (Prinsen Geerligs 1934: 705)

The different research centres were set up in quick succession. In 1884, the Research Station for Sugar Cane in West Java, at Kagok-Tegal (*Het Proefstation voor Suikerriet in West-Java*) was formally decided on by the Cirebon, Tegal, Pekalongan and Banyoemas Sugar Manufacturers Associations and opened the next year. It provided agricultural and other technical advice to factory management, by visits and written communications from centre staff and by performing research combining field work on the estates of member factories and laboratory work at the centre or on surveys using data returns from the factories. Results were published in a series of Kagok Research Station Communications (*Mededeelingen Proefstation "Kagok"*) from 1886 until 1907. This series was then amalgamated with the corresponding one from the East Java station into a single series. These publications were reprinted in the *Archief* (see below), as one of its intended basic functions for the industry!⁴⁹

¹⁴⁹ For further information see the *Verslag over 1899 Van het Proefstation voor Suikerriet in West-Java te Kagok-Tegal* and the corresponding 1900-1906 reports, as well as the 1934 commemorative article by Prinsen Geerligs, by then an old man, celebrating it and himself.

In 1885, the Central Java Research Station (*Het Proefstation Midden-Java*) was set up by, among others, the Japara and Kendal Manufacturers' Associations and the Surakarta and Yogyakarta Land-tenants' Association.¹⁵⁰ In addition to research and advice, this centre also intended to provide courses for "Java-born young men" in the science of sugar cane growing during the quiet season of their factories so that more scientific and practical approaches could be brought into the industry. In 1886 its young founding Director, Dr. F. Soltwedel, made the ground-breaking discovery that cane had male and female forms, and thus could be bred selectively.¹⁵¹ This transformed the recognised possibilities for the sugar cane industries of the world. Until then the only methods known of improving production or resistance had been to discover and trial existing plant stock from other places. This had already been attempted in Java, with trials of local varieties from different areas including other Indies islands, Mauritius and further afield!¹⁵² After the discovery, breeding trials and comparisons of cross-bred varieties in the test fields of the research stations, factories and private cane planters and suppliers were added to those of pure varieties. Unfortunately however, Soltwedel died in 1889. There was increasing dissension between the staff and his successor, while the centre failed to become sufficiently established and valued by its funding factories. It was moved twice and closed in 1893, most employees being transferred to the flourishing WestJava Research Station.

In 1887, the East Java Research Station (*Proefstation Oost-Java, POJ*) was set up at Pasuruan under the auspices of the Surabaya Sugar Manufacturers

¹⁵⁰ Later called the Principalities Land-renters (*Land-huurders*) or Agricultural (*Landbouw*) Association it carried out a similar role in the two Principalities to the Sugar Manufacturers Associations in the Residencies elsewhere in Java, the so-called "government lands" but also represented European non-sugar estates.

¹⁵¹ The same discovery was also made later in the same 1886-7 season by two English botanists in Barbados (Headrick 1988: 241).

¹⁵² The collecting involved trips made by or on behalf of Administrators as well as of Research Centre directors.

Association.¹⁵³ As mentioned above, its initial funding from factories was supplemented by donations from the major companies.

The flourishing West and East Java centres cooperated closely. Both worked on agricultural research and advice, while the West Java centre specialised in technical improvements and the East Java specialised in chemical experimentation. Gradually their managements accepted that operating two nominally separate centres, each with industry-wide concerns, was inefficient. By this time the Syndicate model had already led regional organisations of managements. The two Research Stations' funding arrangements and management committees were unified and in 1906, after about twenty years (thus apparently non-urgently), the centres were amalgamated into the single Research Station for the Java Sugar Industry (*Proefstation voor de Java-suikerindustrie*).¹⁵⁴ The decision was passed almost unanimously by the contributing members. Significantly, many had to wait for "advice from Europe" as such decisions with major financing implications had to be approved by the owning companies' Directors.

Initially the Research Stations were very small. Each had only a couple of highly trained (usually PhD-holding) professional scientific employees employed on five-year contracts. Embodying the colonial position of the Indies and the relatively backward position of the Netherlands, these scientists were imported from Europe, at first either from Germany or having trained there.¹⁵⁵

The priorities of the research work of the centres was set by their management committees, dominated by men with immediate practical concerns. These men also

¹⁵³ A celebratory history to 1904 was given by the Chairman of its Management Committee on the opening of its new buildings (in Dickhoff 1904). These were the basis of the amalgamated Java Research Station.

¹⁵⁴ The Stations' official centenary history has been Handojo et al 1987. For earlier European official accounts from those identifying themselves with the consolidated Station see Dickhoff (1904), Kuyper in *Indische Post* 1924, and Prinsen Geerligs (1934). Also see references by Geerts (1931), who worked there before becoming the first Professor of Sugar Cane Cultivation at Wageningen in 1931, in his article which was his inaugural address celebrating "a half century of cooperation between research and practice" in the industry in Java, and giving details of that research).

¹⁵⁵ Leidelmeijer 1997: 239.

represented those providing the centres' funding. For the first decade of their existence, the Research Stations worked mostly on agricultural problems; on growth, productivity, fertilising, disease and infestations of cane. The initial staff appointments met these priorities. Some in the industry expressed dissatisfaction with the results and range of the work and provoked extensions into other areas of advocated benefit. Proposals to the Syndicate to fund an experimental factory were not accepted.¹⁵⁶

Several important management changes tried to extract more of the production benefits expected introducing newer more effective machinery which had the potential to improve the mechanical and chemical processing of cane into sugar. Using this equipment in the most cost-efficient ways required increasingly detailed attention and measuring at each stage of processing. This, in turn, needed competent employees. Positions for chemists, under a "Fabrication Chief", were created in factories - following the European beet industry by about a decade. The technological understanding required to improve the efficiency of the equipment could come only from analysing current operating data. Rather than using information collected from measurements in only one factory, testing and analysing could be carried out most quickly and validly by quasi-experimental comparative study, using information from as many factories as possible. Comparative analysis was started among the factories associated with the NHM in the mid-1890s, after urging from H.C. Prinsen Geerligs, a trained chemist who was the newly appointed Director of the WestJava Research Station. The results were sufficiently convincing for the Syndicate to commission a proposal from Ir. B.M.A. Carp*, an abnormally-highly trained Administrator, and Prinsen Geerligs for a wider, more inclusive scheme. This was presented at the Second Sugar Congress in 1898 and, although there were doubters the proposal was sufficiently widely accepted by managements for Prinsen Geerligs to be able to start the "joint fabrication control" the next year. The system required factories to collect a range of detailed data regularly and send it for analysis to the WestJava Research

¹⁵⁶ *ibid.*: 242.

Station. For the first few years only a minority of managements were willing or able to provide data but by 1906 this had increased to over half.¹⁵⁷ As understanding and research questions about the production processes evolved, the kinds and amounts of data required changed and increased. This development exacerbated tensions between factories and whoever at the Research Station was responsible for requesting time, effort and accuracy from the fabrication employees. At first, this was the Director H.C. Prinsen Geerligs, and from 1904-8, Ir. J.J.Hazelwinkel*. From 1908 when the new combination and re-division of the Research Stations' activities produced a separate Technical Division which had the joint fabrication control as a major responsibility, the person responsible for the survey and its analyses was Ir. F.W. Bolk*. In spite of the tensions, the system continued and formed a basic element in the technical research and services provided for factory managements.

Aside from these initial steps at the Research Station, developments in processing technology were partly products of overseas research transferred by local employees who read "the literature", by agents of the machinery importers, or by employees learning from working with the newly installed machinery in routine prescribed ways, and partly from the products of trials and innovations carried out in the Java factories by their managements.

Although the services of the Research Stations were appreciated, their efforts did not rapidly produce all the solutions wanted. The serah problem was not solved until the mid-1920s. Before that its damage was only restricted by setting up seedling plantations at higher, disease-free altitudes. It was Administrators not scientists who set up this system from the late 1880s after research in their own fields and at the government's research station at Bandung. The partly engineering-trained Van Musschenbroek and Van Heukelom at the neighbouring North Coast *Tjomal* and *Bandjardawa* were recognised as important in this innovation. Also, the NILM's annual reports from 1890 refer to trial findings from Bandung and *Tjomal*, and to

¹⁵⁷ *ibid*: 253

organising hill seedling supplies. No references were noticed on contributions from the industry's own research stations, which were only three to five years old by then!⁵⁸ Sereh's cause, a bacterium which also causes gum disease, was not discovered until 1918 in Germany. A successful cure, heat treatment, was discovered not for nearly another decade after that. This solution was made redundant by the almost simultaneous success of the Java Research Station in breeding the highly productive and sereh-resistant POJ 2878 variety. This also made redundant both the separate hill plantations for seedlings and existing private seedling experimenters, producers and traders. Establishment of cane variety "libraries" and cane breeding by the Research Stations, often in association with Administrators and other employees, did not produce new successful varieties identified with the Stations until well into the next century. Older, "natural", varieties, such as BlackCheribon, Fiji, Loethers and White Manila were still widely used into the 1900s. The new cross-bred varieties, such as the EK, B, DI, RG, GZ and SW varietal families, which were trialled and brought into widespread use were identified with plantations, individuals on them, or private breeders rather than the Station, even though these people might have been associated with or advised by Station staff. POJ (*Proefstation Oost-Java*) 100, popular from about 1910-1920, was the only Research Station variety used significantly until the mid-1920s. However, the Research Station staff did provide valued advisory and testing services for the plantations and factories as well as original research.

Individual owning companies also set up their own technical development facilities. The Klaten Plantation Company had its own research station for a range of crops. It imported a Delft-trained engineer, Ir. J.C. Boot*, to research and advise on sugar processing technology for the factories it owned. Boot first tested transferred technology the Company had bought then worked on developing new processes. The well qualified and experienced Ir. J.J. Hazelwinkel* also worked on indigo at this

¹⁵⁸ Also see the 1888 "national convention" of interested parties on combating the problem.

centre, after five years as a sugar Fabrication Chief, before moving to the WestJava Research Station.

At this time, as well as Hazelwinkel, there were other cases of the few highest-trained men, such as Ir. F.W. Bolk*, W.C. Dickhoff* and Dr. H. Winter* moving between factories and research positions. Nevertheless, most of the few professionals appointed to the Research Stations, such as Dr. J.D. Kobus* and (later honorary Dr.) H.C. Prinsen Geerligs, never worked in factories.

Increasing the quantity and quality of information about growing and processing increased the technological possibilities available to management, but also placed more demands on management. The increasingly more detailed data being defined and collected allowed management to better assess the internal relations between the successive "stations" in the continuous-process of sugar manufacturing. Being better able to recognise, measure and cost the effects of inconsistencies in the flow, they could more objectively justify modifications, new purchases of machinery, changes in work-practices, and allocation of labour to overcome constrictions in the process. The demonstrable and measurable advantages of improved streamlining increased the demands down through lower levels of management. Their employers expected them to more accurately integrate the successive stages, from cutting and transporting into the factory through manufacturing to packing and transport out again, into a single continuous process. Similarly detailed measurement, reporting and costing increased the opportunity for objective supervision down through the management ranks during the the successive stages of planting.

(ii) Diffusion of new information through publication

As well as supporting the creation of useful information from applied research, management also distributed information. The most effective way to do this was by organising the establishment and funding of one or more industrial journals. These took several years to evolve after the founding of the Research Stations.

There were a few predecessors to what eventually emerged as the industry's journal. A comprehensive private *Monthly Bulletin for Sugar Manufacturers* was published by Thierry Boom in 1891-2. Boom, the commercial and technical agent of a Belgian machinery supplier to the Java sugar industry, apparently put the Bulletin together by himself. It contained technical and other articles, including the minutes of the General Meetings of the Surabaya Association of Sugar Manufacturers, the *Communications* from the Research Stations in both East and Central Java, original articles written by Kobus and other locally-based scientists, as well as information about the market and sugar industries in other countries. Much of the material was reprinted from other journals to which Boom subscribed. The Bulletin, however, was not linked to any other organisation, apparently based on an individual's initiative and dedication. After an appeal by Boom's successor for cooperative efforts and contributions from others, the journal disappeared.

There were also proposals in 1891 to publish a weekly circular for all sugar-factories in Java by the combined efforts of the various "sister-associations" in the various sugar areas. The Surabaya Association started to publish its own weekly Circular, which was very similar to Boom's but included more information about itself. Although it was subscribed to quite widely outside the Surabaya area, the proposals for a more extensive industry journal continued to come from the Association. For editorial and financial reasons, it was decided that this would require the participation of the other sister-associations, so the Association's Chairman was requested to make formal requests to them. This was done by the beginning of 1893 and drew an overwhelmingly positive response, marred by only minor concerns. Later in 1893, the Surabaya Association's *Circulaires*, published since 1891, were replaced by the new, collective, Java-wide journal - the *Archive for the Java Sugar Industry (Archief voor de Java Suikerindustrie, Archief)*.

Establishment of the new journal involved collective organisation. A committee was formed by the Surabaya Association with involvement of others, which organised an editorial, publication and subscription system that could produce an authoritative

industry journal for management. The journal was intended to communicate new technical information and advice that had been professionally reviewed, assist cooperation and both replace the need to subscribe to several other journals and remove the uncertainty about the trustworthiness of much of what was being claimed in them.¹⁵⁹ From 1893, the *Archief* was issued unbrokenly for forty two continuous years until 1934 in the near collapse of the industry. It was then resurrected under different administrative ownership from 1940 for about two years until the Japanese invasion.¹⁶⁰ It provided management personnel with an unparalleled resource of authoritative information, including original articles, major research and technical reports and advice, "reports from practice", information reprinted from a wide range of foreign sugar industry journals, industry-related information such as material reprinted from Indies or Dutch newspapers or parliamentary speeches, formal information from factories, personalia, notices, and non-confidential information from and about the Syndicate and, later, other central sugar organisations. The *Archief* also contained a series of reprinted Communications from the Research Station (*Mededeelingen Van de Proefstation*), and a stream of other important, but more ephemeral, information such as market prices, international import and export statistics from different countries, rainfall statistics, and planting and milling commencements and completions.¹⁶¹ The journal replaced all the other regional associations' publications, and appeared sandwiched between several pages of advertisements. For many years it was published fortnightly and, from the beginning, was substantial; increasing from more than forty editorial pages each issue at a time when the largest Indies newspapers had only a few each day, to well over a thousand pages annually then, after its first decade it gradually expanded to about two thousand.

¹⁵⁹ A partial account was given in its special 25th anniversary issue by its long-term editor W C Dickhoff (*Geschiedenis Van het Archief voor de Suikerindustrie in Ned.-Indië*, *Archief ... jubileenummer* 1 Mei 1918: 3-12).

¹⁶⁰ Its title was changed in 1909 to refer to the sugar industry in the Netherlands Indies instead of Java then in 1940, after its revived publication, to the industry in the Netherlands as well, although it was still produced entirely in the Indies.

¹⁶¹ For a complete list of the *Archief's* editorial contents see Index 1893-1926 and Index 1927-42.

The *Archief*'s editorial control was vested in a committee drawn mainly from the Research Stations, together with factory Administrators and Advisors in the managing companies. It was apparently dominated by the Station staff, both in membership of the committee and in authorship and review of original articles. (Given the intended role of the journal, and the structure of deliberate specialisation within the industry, this was to be expected.) For its first two decades the *Archief* was owned, funded and controlled nominally independently of the Syndicate but, after a vote of "interest-holders", it became the Syndicate's official organ in 1905. Only Dutch was used, with material originally in other languages being translated at the editorial stage.

The journal was well-received from the start. Soon there were nearly three times as many subscriptions for employees (costing f.1 each month) as for factories (costing f.10) suggesting that a significant proportion of the European middle and lower management, as well as the Administrators, found it professionally worth getting a private copy.

M. POLITICAL CHALLENGES TO MANAGEMENT

In general, apart from the State, the managements in the sugar industry at this time did not have to deal with much organised opposition to their self-interested activities.

Attempts to control came from within their own company hierarchies of authority. For most managers this meant from their factory and field lines of communication.

(i) Management and competition

Factories were not in direct competition with each other for shares in the export market. Their mortgaged product was delivered to their financiers, who usually sold it as a commodified, objectively defined, product to exporters' agents at the best price they could at the time. Definition of its quality was basically polarimetric. Light

refracted from sugar crystals was measured using standardised instruments and criteria based on the percentage of the sugar's sucrose content. Marketed sugar was not defined by characteristics of its producer.

Factories did, however, compete for labour, to a marginal extent where factories' concessions were close and near shared boundaries, or when new factories were opened up thereby giving a little more market power to providers of casual workers. In the lesser regulated period before 1899 no evidence was found of competition to lease convenient and productive pieces of land lying between factories, while factories with longer-term leasing arrangements on private lands and in the Principalities were largely insulated from such competition. After 1899 the new Factory Ordinance prescribed the maximum size and boundaries of the zone (*areaal*) within which each factory could lease, thus removing the possibility of land competition between existing factories in existing conditions. It appears that this new system was generally approved by managements whose representatives raised only minor points of detail in the combined industry-official meetings held in relevant Residencies before the new ordinance was introduced.¹⁶² The government's stated intentions were indicated in the sub-title of the ordinance: "Further provisions for protecting the economic interests of the Native population in the plantation centres on Java and Madoera".¹⁶³ This initial determination of *areaal* boundaries did not prevent subsequent competition, when developments of irrigation changed the amount and quality of irrigatable land available. Such irrigation projects were frequently financed in large part by factories, on condition that they would be allocated major benefit. Therefore, potential competition for available land and water lay between existing *areaal*-holders, and between them and proposed new factories. However, this was to be in a later stage of the industry's development. At this earlier stage, factories did not compete for land, each generally operated with a monopoly on compulsorily rotated short-term leases within government-prescribed boundaries. Moreover, although some

¹⁶² Verslagen 1899.

¹⁶³ See the introduction, page 26, of its 1920 revision (*BinnenlandschBestuur* 1920).

factories had various semi-ownership rights over parcels of privately held land or similar arrangements, including in the Principalities, these did not promote rivalry for use of the same land.

Importantly for the culture of management, the increasing technologisation of production provided for increased competition at factory management level over production costs and thus profit margins. This followed from its involving increasingly detailed collection and analysis of operational statistics, which could be compared between factories within groups managed by single companies, and between those managed by different ones. Successive ranks of middle management were accountable for these. Examples of operating statistics were continually published, as surveys in the *Archief* as well as in internal company documents. This publication began before the *Archief* and the General Syndicate, appearing in other publications such as that of the Surabaya Association.¹⁶⁴

(ii) Management and labour

The management of each factory had to continuously assess its needs for labour then recruit people from outside, control and pay them. These recruits would have to be Natives or other non-Europeans because the colonial society would have found it unimaginable and unacceptable for people classed as Europeans to work in labouring positions, on labourers' rates of pay. The obligatory rotation of land use required massively more labour than would ratooning on owned or long tenure rented fields. Every Java crop involved costs for new seedlings, their delivery, and planting in addition to the cultivation, weeding, fertilising and watering costs incurred in any cropping system. However, by far the largest single component of the total crop costs was the initial preparation of new ground, often with deep Reynoso trenches or ploughing and the digging of major irrigation and drainage systems across the entire

¹⁶⁴ Eg. the survey of production, costs and profits in 1891 from 42 factories, 17 identified, in its 1893 Nr. 4 Circular, based on company annual reports.

area to be planted.¹⁶⁵ The ground had then to be restored for rice or other cultivation at the end of each cane harvest.¹⁶⁶ Although the work was hard, by this time both male and female labourers in the old sugar areas were usually in over-supply. Management needed only sufficient cash to find the workforce desired, pay was negotiated in the prevailing local market. The general population was increasing rapidly. The officially estimated population of Java and Madura more than doubled from twenty million in 1880 to forty one million at the 1930 Census, then rose to an estimated forty seven million in 1940. However, local labour supply varied depending on local density of population and alternative opportunities for paid labouring work, so factories employed varying mixtures of local and migrant workers!¹⁶⁷

The management involved in keeping labourers working and turning up as required was largely delegated to the Native foremen who did most of the normal local recruitment. However, to keep a more reliable workforce, various inducement systems, such as payment of bonuses after appearing and working for a minimum number of days, were tried by European management. Apparently, the use of the factories' own resources was sufficient for this. They did not find it necessary to call on governmental resources, such as legally enforceable sanctions against workers not working or absconding after agreeing to contracts, although such methods were widely requested and instituted elsewhere in the Indies during this time. A range of possible precedents were known and discussed within the management levels of the industry. Between 1880 and 1892 sixteen Government ordinances were issued to increase control of

¹⁶⁵ The name for this method of planting new seedlings in trenches came, as did the practice, from the Philippine cane sugar industry.

¹⁶⁶ For examples of these costs see the *Kanigoro* Administrator's annual reports in ARA 2.20.05 Koloniale Bank [Kanigoro file]. Inv.Nr. 118. The comparative detailed figures over five years were filled in on the standard Colonial Bank preprinted forms. The combined costs of Reynoso and irrigation channelling in these were about half of total field costs each year.

¹⁶⁷ The population figures are from Van der Kroef 1956: 63. For other descriptions of the relevant labour market see Elson 1982: 18-20; Elson 1986: 169-174; Houben 1994: 331-2. The previously uncultivated and thus unpopulated area in the inland of the "East Hook" of furthest East Java and an area on the North Coast were not opened up for sugar until about 1905 and 1910 respectively. Especially in the former the lack of established villages forced the management of the new plantations to recruit labour from elsewhere and pay higher rates but this, while an extra effort and cost, does not appear to have presented major problems.

contracted Native and Chinese employees (including against desertion), in particular state and private projects in areas across the Indies. Only one, that applying to Jakarta's harbour works in 1880, applied to Java. There was, however, continuing discussion about the desirability of a Coolie Ordinance, similar to those based on the original one gazetted for Sumatra in 1880, in Java and Madura. This had been a topic of debate in the Surabaya Association since 1887, with information and opinions collected by and circulated among its members and elsewhere. Noticeably, European colonial assumptions were indicated by the discourse of the debate, which included references to "simple villagers" and "the half-civilised Native society". Subsequently, the topic of penal sanctions was periodically revived, but only by individuals. The collective industry was never convinced.¹⁶⁸

As had always been the case, irregular competition for labour arose from large government or other infrastructure building projects such as railways, irrigation or ports, from commercial agriculture using paid labour, and a still low but increasing pull from urban industries. In various internal reports between levels of middle management there were occasional references to local cases. There were also some cases of competition for casual labour within the industry, for example during the 1890s in some areas the setting up of new and the expansion of nearby existing factories and plantings reportedly had some demand-driven effects with upward pressure on local costs of wages, ground-leases, transport and materials.

No mention of the about the *permanent* Native employees at this stage of the industry have been found in the records management used outside the factories.

¹⁶⁸ Eg. *Circular of Surabaya Association of Sugar Manufacturers 1892*: 451-93

(iii) Management and government officials

(a) Native officials

Factory management, either through individual Administrators or more collectively through the Syndicate's Departments after they had succeeded the regional Manufacturers' Associations, does not appear to have been much troubled in relationships with the officials of the Native Civil Service (*Inlandsch Bestuur*). Much of this Service was still traditional and unschooled. Many Native administrators operated in undemanding ways when dealing with, relatively, extremely wealthy and confident Europeans, such as Administrators of sugar factories or their subordinate European management staff.¹⁶⁹ Normally, reasons for Administrators and Native officials to deal with each other were extremely limited, the latter's main role being administration of the Native population.

During the flourishing of the Cultivation System there had been clear mutual interests between officials, Native and European, and factory managements based in officials' roles in cane cultivation that used enlisted Native labour and land. Some continued, both officially and unofficially. Official dealings declined over the 1880s as the "government cultivation" of sugar was reduced to zero. Unofficially, some factory managements occasionally utilised officials' authority and influence to maintain the labour supply on a privately paid basis. They would thereby be acting as the officially recognised, or unofficially influential, agents of the factory management. Supervision by higher Native officials of their subordinates was partly intended to reduce extra payments to them, either by workers or factories, and to monitor the disapproved use of advances to obtain labour. It is not known whether members of the village administrations applied their informal influences to keep the supply of labour adequate when requested by the factory's foremen, or what overlappings in functions there might

¹⁶⁹ The average European staff wage was considerably above, often several times, that of local or most regional officials. (See Appendix 16; Sutherland 1979 esp. 133).

have been. Village and district elites in sugar areas were certainly involved in organising land and labour as important benefits of their position!⁷⁰ On the other hand, because they were supposed to be exercising their authority in the interests of the local population they could conflict with factory management over things like the assessment of fair values for land leasing (officially based mainly on the estimated value of foregone rice crops) and ownership of the land wanted for leasing by factories. The European Administration had the final decision on these matters but, as they were advised by the Native officials, there were some discretionary influences exercisable by the latter. Of course, they could exercise their discretion in favour of the land-owners, factories, themselves or other officials. Nevertheless, in the management records and public statements of these times, no cases have been found of complaints about the influence of Native officials.

By comparison, there are occasional references to fees paid to village heads and other officials, and to illicit shares they have taken from money paid by factories ostensibly to Native land-owners or workers. For example, the 1906 report of the Colonial Bank included a reference to f. 10,000 having been paid as gratifications to the "Indische Bestuur [Indies Administration] and the higher officials".⁷¹ There were many possible ways for Native local officials and village heads to derive extra personal benefits from the system. They could accept useful advances and other loans from a factory, or be paid extra administrative fees. Rental money sent in from a factory for government-supervised land leasing could have percentages extracted as it moved down through layers of the local bureaucracy towards the local land-owners. Within a generally unexamined acceptance of loosely specified fees for designated services, officials could demand extra informal fees from landowners. The "officials-land", fields whose proceeds supplemented officials' wages, could be carefully allocated to be in the highest rental areas and also surreptitiously extended. Influential position or payments could be used to arrange facades of ownership in which local people were listed as

¹⁷⁰ Eg. Elson 1984: 144-5.

¹⁷¹ Van Capellen 1941: 9.

owners but the rental payments went to others. In some places European officials were fearful that village heads and other lower Native officials who were in debt to Chinese or to sugar factories were vulnerable to influence from them. Another example is given in a complaint from a Controller, the lowest European official rank, that some factories were not paying for the repair of local roads damaged by cane wagon transport. His problem was that he did not know how to arrange the payment for the work. If the factories paid cash to the village heads to pay labour, the Controller could not convince them that they should not use compulsory village-service labour and keep the money, but use the money to pay workers.¹⁷²

(b) European officials

The middle managements' relationships with European government officials could be more difficult. The European central Indies administration decided such issues as taxes, duties, state railway tariffs and subsidies. The Residencies' European government officials administered (and thus had discretionary power over) the land leasing and employment arrangements with Natives. The central government's end-of-the-century Ground-lease and Factory Ordinances (1895, 1899) gave the Resident and his officials a central role in approving the process and content of leasing arrangements between factory managements and Natives and in deciding the maximum amount of land a factory could lease. Permission to lay rail tracks on the sides of public roads was also a Residency matter. In all areas of official discretion, European government officials had a duty to look after both the interests of the factories and the wider interests of the Native society, particularly in its agricultural activities. An added problem for the official was that his publicly performed duties were under constant scrutiny from his superiors.

The few European officials of the general administration, Residents, Assistant Residents and Controllers, were a small career cadre with post-secondary

¹⁷² Eg. see MVO Resident Cheribon 1908: 2; MVO Ass-Res. Pati 1928: 80; MVO Ponorogo 1908: 25; MVO Res. Pekalongan 1926: 33.

administrative-legal specialist training, mostly from the Netherlands. An indication of the scale of their responsibilities is given by a 1900 note by a member of the lowest rank. He mentioned that he was Controller of 5 districts that contained 314 villages and several towns with a total population of 373,000 Natives, 80 Europeans and 702 Chinese. An Assistant-Resident would have administrative responsibility on a similar scale, and a Resident several times this.¹⁷³ Thus, the socio-educational backgrounds of the general European officials differed from the backgrounds of the European factory managements at this time. Few of the latter had more than lower secondary education, plus a little trade training in some cases. But by the late nineteenth century, more engineering and other technically trained officials were being employed in the specialised government administrative departments that sugar managements had to deal with. The backgrounds of these officials were more similar to the few most qualified sugar employees. This was most obviously the case with Irrigation. The first "Irrigation Brigade" was formed in 1885 and became a separate Irrigation Department in 1889. The number of Delft-trained engineers in the Indies jumped by about fifty per cent to over sixty in the second half of the 1890s and then more than doubled in the first five years of the twentieth century. Overall, 87 people in the Indies were classified as "engineers" in 1878, 125 in 1888, 169 in 1898 and 302 in 1908. Probably the great majority were employed in government services, as they were later in the Indies colonial society.¹⁷⁴ It seems that the political attitudes towards the sugar industry varied among the officials. Some were suspicious and negative about giving any assistance to meet its claimed needs, especially in its negotiations with Natives. Their decisions could be crucial and were not vulnerable to influence in the same ways as the officials of the Native Administration, whose powers moreover were limited to helping or hindering a management's interests.

¹⁷³ See *Memorie Van Overgave Controleur District Ponogoro 1900*: 1-2. For further information about European general officials' training and employment see Hooperc 1962: 28-9; Volkenkundig Museum 1989; Otterspeer 1989a; Fasseur 1989; Fasseur 1993; Fasseur 1995a; Van der Doel 1994.

¹⁷⁴ Furnivall 1939: 199; Van Doorn 1996: 118-9, 164.

(iv) Management and state assistance

At the beginning of this period the Indies was developing into a late colonial state. Its government formalised and strengthened its control, and started to enlarge and standardise its administration. The local state began to develop more independently from the metropolitan government and to accept more responsibility for economic and social improvements for the bulk of its colonised peoples. These changes, faltering at first, became more pronounced around the beginning of the twentieth century and accelerated after the so-called "Ethical Policy" of responsibility, already accepted by many members of the Dutch government, was publicised in the Dutch Queen's 1901 Speech from the Throne.¹⁷⁵ In the decades either side of the turn of century, the colonial government was enforcing its previously nominal sphere of influence into full imperial control, demonstrating its ability and willingness to enforce its claims with extreme violence in its several local wars against Native resistance in the more frontier areas of its, still Java-centred, Indies colony.¹⁷⁶

Nevertheless, unlike other business interests such as the inter-island Royal Mail Shipping Company (*Koninklijke Paketvaart Maatschappij, KPM*) with its symbiosis with government civil and military interests, the sugar industry was only on Java. Java had been controlled securely by the Dutch since the middle of the 19th century (see Map 1). The industry could assume the colonial government would suppress any local rebellion against imperial control that would also threaten the industry's interests, but realised that it could not convincingly justify further assistance. Possibilities for symbiosis were recognised more clearly later.

¹⁷⁵ Eg. Locher-Scholten 1981. Also see Cribb 1994, Darwin 1999, Touwen 1999 for further discussion of the "late colonial state".

¹⁷⁶ See Wesseling 1988; Lindblad 1989; and Locher-Scholten 1994b for significant contributions to the debate on "Dutch imperialism" around this time.

(v) Management without political, industrial or civic challenge

During this period there were few challenges to the management of the sugar industry from potentially opposing interests in the Indies. There was not organised, significant contestation either of industrial relations or in the wider political arena.

The effective industrial unionisation was only starting near the end of the nineteenth century in the Netherlands. In agriculture it was even weaker and had not yet reached the European employees in the Dutch Indies.¹⁷⁷ There were no Native labour unions for many years. Government involvement in the industry's relations with Natives was largely restricted to monitoring lease and employment arrangements not yet pressuring managements to pay more or improve conditions. Political party organisation was still forbidden, and there was no parliamentary arena in the Indies where this would be relevant. Formal organisation of Native cultural and political life beyond the local did not start until a few years later.¹⁷⁸ There were close press restrictions until 1906 and, even after that it remained illegal to attack government laws or regulations.¹⁷⁹ Moreover, very few Natives apart from in the elite, who were largely associated with the colonial government, were literate in any language at this time. The small Chinese community was better organised, but their arrangements, for welfare and more active economic self-interest do not appear to have had significant effects in the sugar industry. Nothing was reported about them in the internal or public literature about the European majority of the industry. Whether they carried out any activities in its Chinese parts is not known but there were no contemporary suggestions that they did, although there were plentiful references to other activities of the Indies Chinese.

¹⁷⁷ Eg. see Van Voss et al 1988, especially Frieswijk 1998, Van Voss 1988b; Zonneveld 1992. The European sugar employees union in Java, among the first, was not founded until 1907 (see next chapter).

¹⁷⁸ See next chapter.

¹⁷⁹ Adam 1995: chaps 2,3, pages 51-5, 174-5; Maters 1998: chap II; Cote 1996; Mastini Hardjo Prakso 1984; Termorhuizen 1988: 141, 276. As well as Dutch-language papers there were several in Indonesian languages during the second half of the nineteenth century, including some in Javanese script, although in general their editors were European, usually Eurasian.

There were still only preliminary models in the colonising Netherlands for organising political interests in the colonised Indies in ways that would have pressed management interests to respond. Dutch political parties had been started from the late 1870s, including the first socialist party in 1894. At the same time, the Dutch "pillarisation" of society into Protestant, Catholic and secular institutions providing for most aspects of organised life, began. In 1848, a very limited male suffrage had been introduced. This was widened in 1886 and 1897, until manhood suffrage was reached in 1917, and extended to women in 1922. However, there was still very little active political participation by the general population. Their involvement was more or less restricted to attending large, uplifting and celebratory solidarity meetings, and then leaving the party leaders to govern on their behalf, or on behalf of their respective pillars within society. In the 1880s the first social legislation was passed by the Dutch parliament. It protected Dutch workers, women and children from some exploitation. In 1901 the first Workers Compensation Act was passed, making accident insurance compulsory for a large proportion of Dutch workers, and setting up a national insurance bank to provide it. In 1892 the introduction of some direct income taxation, not extended until 1915, was politically linked to the Dutch State's increasingly active role in providing services and administration for Dutch society. In contrast, in the late nineteenth and early twentieth century period, there was no serious consideration of any form of representative government for the Dutch East Indies society.

Although banditry, physical assault, intimidation and robbery were not uncommon in the wider Javanese rural society, there do not appear to have been direct and remarkable consequences for the sugar factories or their European managements.¹⁸⁰ Managements' continuing concern about "criminal activity" was with reporting, attempting to analyse and stop the complex phenomena of cane burning. Attempts to analyse and prevent were made by individual factories, Departments of the

¹⁸⁰ One case in a sugar area causing concern to factory management was reported by Van Moll (1905). A more general discontent about widening land lease by sugar factories was claimed by Kartodirdjo (1973: 88-90) but in relation to complexly-caused protests against local Native officials rather than the factories themselves.

Syndicate and on behalf of the whole Syndicate!¹⁸¹ In the industry's internal discussions on crime, managerial concerns focussed on theft of cane from the leased fields. But even this appears to have been usually simply managed, as with cane-burnings, through increased guards and pressing local officials into more policing and punishing.

N. SUMMARY: THE ORGANISATION OF MANAGEMENT EXPERTISE

After the 1884 commercial crisis management evolved in several ways. Ownership was changed from personal to corporate forms. Large Dutch financing companies took complete or part ownership of a minority of factories, and a management influence over others. Nevertheless in reality many of the previous families continued in ownership, albeit incorporatised and partial forms.

Management was not suddenly and dramatically converted. Changes, made over about two decades, were gradual not abrupt, incremental and not radical. Individually and collectively, middle managements organised and produced the expertise they perceived as necessary to operate their industry more efficiently. Exchanges of industrial information and lobbying of the government to meet the perceived interests of the industry continued at the regional level. In addition, a central body, with specialised expertise, was established in Java to coordinate and strengthen the industrial and political functions of management.

Management hierarchies of promotion and authority crystallised. Increasing technological possibilities were related to increasing technologically-driven demands on European middle management. Formal technical training and a colonial dual labour market recruiting separately from Europe and the Indies started to appear in the development and extension of lower and middle management expertise. To serve this

¹⁸¹ Eg. See Elson 1979a; "Request Van het Departement Besoeki ... in zake rietbranden", *Archief* 1904: 195-215; "Over de rietbranden in de afdeeling Kraksaän en hunne oorzaken", *Archief* 1904: 441-451; "Rietbranden", *Archief Bijblad* 1908: 181-97; Paets tot Gansoyen 1909; Suhartono 1995: 146, 148).

evolving expertise, information about the latest developments of technology was collected and distributed among management, with new information and advice from management-organised, locally applied research becoming a significant part of this expertise formation.

During this period of about two decades after the 1884 crisis, colonial Java was still enforcedly quiescent. Management was not subject to political challenges from organised potential opponents other than European government administration.

However, during the next decades, this would change remarkably.

Chapter 3 MANAGEMENT AND THE 1917-20 CRISES OF REPRESENTATION

A. INTRODUCTION

This chapter argues that the major changes in management structures during 1917-1920 were responses to a series of inadequacies demonstrated in the collective representation of individual managements, rather than being the evolutionary consequences of changing technology. Arranging collective representation includes members agreeing on several related issues; whether authorisation of a single representative will be organised, who this representative will be and what the representative's portrayal of the collective view will comprise. This chapter shows how these issues were faced and resolved within the management of the Java sugar industry during this period. Firstly, I will describe how upper management in the Netherlands established its supremacy over middle management in Java in the representation of collective industry interests in general. Secondly, I explain how management responded to trade and industrial consequences of the First World War and political changes in Java and Europe by setting up two new central organisations for collective representation, one in the sales market and another in industrial relations. These organisations demonstrate the industry managements' preference for a united standardised approach rather than open competition between companies. The chapter also shows that during this period the colonial dual labour market supported a hardening racialisation in relation to professionalisation of management, training and applied research.

B. EXPANSION OF THE INDUSTRY TO 1920

Over the first two decades of the twentieth century there were major technical developments in the Java sugar industry. By 1917 the average plantation area had nearly doubled to 910 hectares, while the average cane production per hectare and sugar content had been improved. Sugar production had more than doubled, while about half of the sugar produced was of the more refined "white" grades where there was none at the beginning of the century. These quantitative and qualitative improvements had been achieved while also keeping production costs down. The general technological imperative was to produce as much as possible as profitably as possible, from a maximum plantable area. The generally incremental increases in capacity and in matching processing capacities through the successive stages of manufacturing, had been accelerated in several factories by their having been internally rebuilt between the end of one season and the start of the next.

Most of the expansion of production was from existing factories and plantations. The most obvious exceptions to this generality was the HVA's giant new *Djatiroto*, commenced in 1905 in a previously uncultivated marshy "waste lands" area in the eastern end of Java, and the NHM, Colonial Bank and Java Plantation Company, who had won planting concessions and built factories in a newly irrigated zone next to the continuing North Coast sugar area after 1910.¹⁸² The only major owning and operating company to have expanded significantly by building or acquiring more factories had been the HVA.¹⁸³ During the decade 1906 to 1916, the company had added eight more to its six factories in the Kediri region and another next to *Djatiroto* in the East Hook, in addition to the huge, and initially unprofitable *Djatiroto* project itself. By 1920 the HVA was operating twelve large factories, most in the area of Kediri where it also had a variety of other plantations and absolutely dominated the region. Five of the Kediri

¹⁸² *Soemberhardjo, Bandjaratma, Petaroekan* respectively, all opening in 1913.

¹⁸³ For more information about this expansion see HVA annual reports during this stage; Bij het Vijftig-jarig jubileum der HVA", *De Indische Courant* 21/2/1929; Goedhart 1999: 33-41.

factories had contiguous zones of planting concessions which shared a common fixed and movable rail-net, so the cutting and transporting of cane from all the concessions could be managed for the most economic operation of all the factories as an integrated unit.

In spite of these HVA expansions, no company dominated the market. This is shown in the respective proportions of the sugar the various companies brought into the first, unsuccessful, 1917-18 selling cartel which controlled about sixty per cent of the total production (see below).¹⁸⁴ The HVA, supplying about 14% of the total market from its own factories, was not included in that first cartel. The NHM was the largest supplier, but with only about 16% of the total. Nevertheless, as shown later, management decisions of major companies could have unavoidable consequences for the whole industry.

C. UPPER MANAGEMENT TAKES OVER COLLECTIVE REPRESENTATION OF THE INDUSTRY

(i) The continuing Syndicate

The salaried position of Chairman of the Syndicate had become full-time work, usually for a legally-qualified negotiator based in its Surabaya office. The part-time Van Musschenbroek (1903-7), who also maintained his position as Administrator and other factory-oriented superintendence and advisory work, had been followed by lawyer Mr. A. Paets tot Gansoyen (1907-13), briefly by G. de laValette, an ex-Resident of Pasuruan, then by Mr. S.J. Hirsch (1917-21). The last-named was partly subject to,

¹⁸⁴ The NHM supplied 26% of the 60%; NILM 18; Principalities Plantation Co 14; Mirandolle Voûte 12; Colonial Bank 5; Internatio 3; Eschauzier 5; Anemaet 4; Coster & Voorhout 1; Tiedeman & Van Kerchem 2; Kooy 5; Others together 6.

partly organiser of, the significant changes, which do not appear to have been foreseen at the time he came into office.

Until 1917 the Syndicate was largely a representation of middle management, its central committees having more statutory representatives of Administrators than of companies. For example, in 1914 the Management Committee (*Dagelijk Bestuur*), which met monthly in Surabaya, consisted of the Chairman and Vice-Chairman of the Syndicate, the representative of the NILM as Vice-Chairman of the Committee, representatives of the HVA and the Principalities Plantation Company and four Administrators. In 1915 the Central Committee consisted of the Syndicate Chairman; twenty four Ordinary Members, Administrators chosen by their Departments; and sixteen Extraordinary Members, mostly representatives of the major management and owning companies. The activities of the few paid Syndicate staff had to follow a work program continually discussed with the Departments, a reminder of the source of the authority of its claim to represent the industry.

Into at least the second decade of the century much of the Syndicate's activity had been carried out in its Residency-defined Departments. Each of these held its own meetings of members, mostly Administrators, and elected its own executive. The topics discussed at these meetings give indications of the mutual concerns of the Administrators. In 1905 for example, a summary of these reported that nearly all Departments had spoken about irrigation, water regulation, contributions for irrigation purposes, guarding canefields and cane-burning, improving cattle, contributions for the use and repair of major roads, safety regulations, scarcity of small money to pay casual labour, technical associations and congresses.¹⁸⁵ In many cases communications with the relevant Resident or the Governor-General had requested or proposed future rearrangements in the interests of the industry. Most companies preferred financial contributions to be on a negotiated voluntary basis rather than a compulsory fixed rate. However, there was apparent acceptance that factories benefiting from new irrigation

¹⁸⁵ *Archief Bijblad* 1907: 335-47.

or similar provisions would pay for at least some of them themselves, and that payment should provide for the appointment of government engineers for the projects.

As well as lobbying government, an important part of the central Syndicate's benefit to managements was its public relations role. The Syndicate ably presented their case whenever criticisms or demands were deemed to be against their collective interests. In addition, the Syndicate arranged and subsidised presentations at international exhibitions that deliberately competed against other sugar exporters such as Cuba. After its 1917 formation as the peak association of Netherlands-based owners (see below), BENISO took over the international publicity role, for example, the 1920 planning for the Java industry's exhibit at the proposed 1921 London World Exhibition.¹⁸⁶

The Syndicate sent submissions to government, information to supportive newspapers and advice to people who could privately or publicly voice management's perspectives along with their own. The Syndicate's small executive and central office staff, supported by the Research Station's records and other resources when necessary, produced many long and statistics-filled submissions, about various taxes, railway tariffs, sugar storage requirements, irrigation possibilities, and the like. These could involve the construction and use of statistical series to provide historical depth to their case, for example, on cane burning over more than a decade or the relative benefits of rice and cane growing over the past twenty years. The type and quantity of data used could be remarkable.¹⁸⁷ Other survey and statistical articles supporting the industry,

¹⁸⁶ Secretary Van Hasselt to BENISO Management 16/10/1920.

¹⁸⁷ In an example of the so-called "European method" of research, the published report of *Tjoekir's* rice-growing trials that were intended to increase production and to disprove allegations that Natives were necessarily disadvantaged by factories' use of their land, analysed over a dozen agricultural and supervisory variables in data collected over fifty three villages in four districts involved in a total of eighty trials over two years. Another example was Van Moll's 1913, eighty page, article on cane-burning in the Kediri Residency. (For these two cases see *Archief Bijblad* 1910: 1-12 and *Archief* 1913: 1015-1045, 1047-97 and respectively.)

submissions and arguments, and the Syndicate's responses to critical articles in other journals and papers were reprinted in the *Archief*.¹⁸⁸

The Syndicate called on its considerable resources of legal and scientific personnel, and rewarded them accordingly. No other body, apart from the government, had comparable resources. A major example of the scale and detail of what the Syndicate could produce was the several-hundred page technical paper on the past and potential rice supply of Java, published in mid-1919 by Dr.Ph. Van Harreveld, Chief of the Agricultural Division of the Research Station. The paper was in support of the management case against the threatened forced reduction of cane planting. Initially, four hundred and fifty copies were printed by the Syndicate for distribution within the Indies then, after revision, two hundred more copies, including one hundred for Dutch parliamentarians, were sent to BENISO, the factory-owners' organisation in the Netherlands. This contribution to its cause was so well received by members of BENISO's management that they immediately proposed to pay VanHarreveld f.10,000. Payment was postponed by the BENISO Chairman. He proposed instead that it was more appropriate for the Syndicate's management to handle the matter in the Indies so that the Indies-based companies could also take their part in the donation, the Syndicate members from Netherlands-based companies being authorised to contribute by the owners which BENISO represented. This was agreed to, and the payment was made on that basis.¹⁸⁹

Nevertheless, although the managements' Syndicate appeared powerful, by 1909 internal concerns had been expressed. These included complaints about a lack of cooperation within and between Departments and an unwillingness among some members to submit routine survey or special investigation material gathered to benefit the whole industry. The existence of some Departments seemed precarious. A more

¹⁸⁸ Eg. See the exchanges with J Benjamin* in 1908 and Mr C Th vanDeventer in 1910: *Archief Bijblad* 1908: 868-870; *Archief Bijblad* 1910: 331-348, *Archief* 1911: 603ff; *Archief Bijblad* 1910: 957-65, 972-84, 993-7. Also see Kievits 1921 for an example of publicising the industry's local contribution to the Native economy.

¹⁸⁹ Minutes of BENISO Management Meeting 17/6/1919; BENISO Annual Report 1919: 2.

active engagement of more members was believed essential to defend the industry against the perceived increasing attacks from the "outside world".

Although the Syndicate had been founded from among the Administrators, and much of its activity continued to be carried out amongst them, their involvement had gradually dropped until, in the affairs of some Departments, only a minority were taking active part. Moreover, although Administrators were still involved, representatives of companies, the salaried Chairman and other staff had been taking major roles in the central organisation. Although crucial to the operations of the Syndicate, this central part had remained small. In 1909, with an annual income of about f.70,000, it still employed only a couple of staff, and had just moved from a small rented house in Surabaya to a larger one, big enough to hold committee meetings.

(ii) The formation of upper managements' BENISO, the Union of Dutch-Indies Sugar Estate Owners

Until 1917 upper management had no direct collective representation in the Netherlands or the Indies. The only body representing the sugar industry in the former had been representing the Java-based Syndicate, thus middle management. There had been no collective representative body at all in the Netherlands before 1907 when the then twelve-year old Syndicate had set up a relatively arbitrary "Representative Committee". At its foundation this Committee included Mr. J.W.Ramaer, the recently repatriated ex-Vice-Chairman of the Syndicate who was then employed from 1908 as the Syndicate's Permanent Representative in the Netherlands, together with Van Musschenbroek, the immediate ex-Chairman of the Syndicate, F.M. Delfos and J.M. Pynacker Hordijk. There was constant communication between the Syndicate's Chairman in Java and its Permanent Representative in the Netherlands that, "in the nature of the business, cannot be publicised. However, it (wa)s kept at all times in the

Chairman's office for inspection by members of the Central Committee!⁹⁰

Simultaneously, Prinsen Geerligs, ex-Director of the West Java Research Station, was appointed Representative in the Netherlands of the Research Station and *Archief*, and commenced sending a continuing stream of articles, market and other information to the *Archief*'s editors. Prinsen Geerligs had repatriated at about the same time as Van Musschenbroek and Ramaer. This sudden wave of previously active central participants in the collective activities of the Java industry arriving in the Netherlands clearly contributed to the setting up there of the Syndicate and other representation bodies at this time.

By the mid-1910s, upper management's position had been strengthened. The Representative Committee had recommended, and the Syndicate had agreed, that Committee membership could include Directors of companies related to the Java sugar industry. The Committee rapidly became comprised of mostly upper management representatives even while formally only the subordinate Netherlands committee of the Java-based Syndicate - itself constituted from middle management employees of the companies on the Committee. Upper management's next step was to reverse the relationship. The Committee formally proposed this and at the end of 1917 the Union of Dutch-Indies Sugar Estate Owners (*Bond van Eigenaars van Ned.-Indische Suikerondernemingen*, *BENISO*), a new body formally representing the owners, was established. Officially founded on 21 February 1917, its statutes were approved by Royal Decree 28 January 1918. Ramaer, previously the Permanent Representative of the Syndicate, was appointed first Chairman of *BENISO*. As with the Syndicate, the Research Station and the *Archief*, *BENISO*'s funding came from an annual levy based on the area planted by members' factories!⁹¹ The levy was first set at about fourteen

⁹⁰ Syndicate Annual Report 1909: 14.

⁹¹ "Eerste Jaarverslag van den Bond van Eigenaren van Ned.-Indische Suikerondernemingen van af de oprichting tot ultimo 1918". By comparison, in 1921 the JSWB (see below) was also costing 42 cts, the Syndicate subscription had been increased by 14 to about a guilder, and the Research Station's was up about 90 to nearly 4 guilders/hectare.

cents per hectare for 1918 then, as the scope and costs of the association's activities were expanded, increased to twenty eight for 1919, and forty two for 1920.

BENISO then officially represented the Syndicate and the Research Station in the Netherlands, while the Syndicate became BENISO's representative in the Indies. BENISO received a copy of all material distributed by the Syndicate, its Chairman was in constant communication with the Syndicate Chairman, it received detailed information about the activities of the Research Station and was involved in the Station's staffing decisions. Highly educated personnel were still found mostly in Europe and, after the organisational and consequent staff changes of 1919-1920, BENISO, in consultation with the retired ex-director and Netherlands Representative of the Station (the now honorary Doctor) H.C. Prinsen Geerligs, sent out twelve new staff members to the various divisions of the Station in 1920⁹²

The new BENISO quickly established its operations. In 1918 its administration moved from the rented office of the previous Syndicate Representative Committee in Den Haag to its own newly purchased premises there. Membership rapidly increased to about a hundred, thus nearly all, of the eligible, Netherlands-based, owning companies. These were represented by their Directors. BENISO's Management Committee, which met roughly monthly, had about a dozen members. By statute, most were the individual representatives of companies with several factories, but three were chosen to be group representatives of the smaller companies which each owned only one or two factories. Only those owning or directing factories which together planted more than one twentieth of the total Java cane area could be on the Committee. This covered all the major financiers, the non-owning Internatio being included as it had been appointed Director of others' companies. General meetings, at which lectures were given on new technical and political developments in the industry, were held rarely, usually only once or twice a year including the compulsory annual general meeting, .

⁹² BENISO annual report for 1920: 4.

BENISO was the first Netherlands-based collective representation of upper management. Other major parts of its services to the separate company managements were its collection and distribution of information to members, and its provision of an organised setting to debate and decide general policies. Most internal communication was from the Chairman or Secretary to all members of the Management Committee, but there was also a continual stream of information, in full or condensed form, sent out to all members about relevant matters in the Netherlands and the Indies, including from the Syndicate and the Research Station. Much was technical, business and political news about things such as administrative or taxation changes and BENISO's opinions and actions about them that were considered to be relevant to the industry. Reports kept members up to date with the situation in the Indies, particularly on general matters about the whole industry which might not be expected to be among the reports coming to Directors in the Netherlands from their own factories, Agents or Representatives on Java. In 1920, after more open cooperation and more standardisation of employees' conditions had been accepted, further information was collected, collated and circulated to members about the wages, bonuses and conditions provided by the different companies, as well as their annual dividends. Other information considered relevant from other sugar industries was distributed. In one example, during the industrial disputes in 1920 BENISO circulated information from the Hawaiian Sugar Planters Association about how it had dealt with conflicts with its Japanese employees in 1909 and 1920.

Publicly, BENISO was the single representative of the owners in lobbying the Dutch government and other appropriate parties and in placing articles in the Dutch press. BENISO collected information from surveys of members and the annual reports that companies sent in to BENISO's archives and utilised it in the many submissions it made to government and the articles it placed in papers and journals. Successfully and quickly, BENISO became identified with the industry and was continually approached as such for information and for financial support by other institutions. Nevertheless, in spite of its apparent representational authority and influence, it was always only a

voluntary, administrative and advisory organisation, with no further authority over its members.

Like the Syndicate, BENISO never employed more than a very small number of staff. For nearly two years after its founding there was only one, the Chairman Ramaer, who carried out all other duties as well. In mid-1919 a second staff member, Mr. J.H. Van Hasselt previously Chairman of the Principalities Agricultural Association in Java, was appointed, initially as Secretary but then also as Treasurer. The value of managing public impressions through the press came during the industrial struggles of 1919-1920 (see below). For example, the HVA noted "inaccurate press reports" and pushed for a "journalistic division [of BENISO] that could immediately put out corrections"¹⁹³ Within three months, in September 1920, the journalist H.Ch.G.J. Van Mandere was employed to fill this role as a Second Secretary. As with the others, Ramaer and Van Hasselt, Van Mandere had previously worked in Java.

(iii) The establishing of BENISO supremacy over the Syndicate

After upper managements had set up BENISO to be their collective representative in the Netherlands they continued their move towards overall control in the industry, pressing for changes in representation on the central committees of the Syndicate and the Research Station in Java. These had been originally set up to represent the middle management Administrators, based in the factories and organised through the Departments. However, BENISO argued that representation should be of the owners who employed those in the Indies. In part, this was to prevent any problems of the employees of the Syndicate disagreeing with their employees in BENISO - although there was no record of any such happening. It was also a formal and forced acceleration of the changes towards top-down control that had already been occurring. Company Representatives and salaried executive staff had been replacing

¹⁹³ HVA to BENISO 7/6/1920.

Administrators as the active members of the central committees, accompanied by a fall in involvement in the Departments. During the negotiations, several of the actively involved Administrators argued strongly against the proposed changes, citing the history of the Syndicate and the importance of having "practical men" in positions of responsibility and power. But there seemed to be an acceptance of the change among the majority as almost all Departments did not voice objections. The internal debate involved many written and telegraphic messages between BENISO Chairman Ramaer and Syndicate Chairman Hirsch, copies of minutes of meetings sent between them, communications between owners in the Netherlands and their representatives in Java, several circulars sent from Ramaer to BENISO members, and from Hirsch to Syndicate members. There were also informal and formal meetings at Departmental and central levels in Java. Hirsch toured the sugar areas discussing the proposal, arguing in its favour, and reported that most Administrators did not much like it but would accept it. After about a year and a half, a meeting of the combined management committees of the Syndicate and Research Station on 14 February 1919 voted in favour. Only three, all experienced Administrators, voting against the proposal. The minutes of this meeting show the arguments and assertions in detail. As well as the committee members expressing their differing views, Van Hasselt attended and spoke as previous Chair of the Principalities Agricultural Association, which experience he referred to, and as current Secretary of BENISO which he represented.¹⁹⁴ The decision appeared to have been a foregone conclusion, with a mutually satisfactory agreement that an owner's representative should be the Administrator unless someone else was stipulated.

The Syndicate was thereby changed from representing middle managements to representing upper managements. The authority of the middle management members of its central committees was now delegated to them by their upper management

¹⁹⁴ "Notulen der Gecombineerde Vergadering van het Dagelijksch van het Algemeen Syndicaat van Suikerfabrikanten in Nederlandsch-Indië en der Commissie van Beheer van het Proefstation voor de Java-suikerindustrie" 14/2/1919.

employers. In 1918 there were about 177 ordinary members of the Syndicate, representing Administrators. By 1920, with membership now representing owners, some of whom owned several factories so had multiple votes, this dropped to 115. There could be combined meetings of the management committees of the Syndicate and of the Research Station of a dozen men (each a member of both committees) with only two representing factory Administrators and, apart from the salaried Chairman and Secretary, the others representing management and owning companies. In 1919 these companies were the Colonial Bank, HVA, Klaten Plantation Co, Kooy & Co, Principalities Plantation Co, NHM, NILM, and the Eschauziers' Sentanen-Lor, Brangkal and Dinoyo Operating Co.¹⁹⁵

(iv) Upper management and the organising of collective representation in export sales

From 1917 management's setting up of two successive monopoly export cartels was a combined demonstration of mistrust between producers and sellers in the collective representation of interests in the sales market and of tension in the colonial system between potential collective representations in metropole and colony.¹⁹⁶

The Java cane sugar industry had continued to be powerless to influence the selling price of its product. After the 1902 Brussels Convention restrained national protections and subsidies, the international prices obtainable for sugar had been strongly influenced by the European beet sugar harvests. While European and American markets declined for Java, the British-Indian market developed. In 1909 more Java sugar had gone to British-India than through the Suez Canal to Europe. By the beginning of the First World War, in which the Netherlands and thus its colonies

¹⁹⁵ *Ibid.*

¹⁹⁶ This section is mainly based on material in the *Jaarverslag der Vereenigde Javasuiker Producenten van der oprichting af te ulto 1919*; *Wellenstein, Krause & Co 1882-1932*; Tio Poo Tjiang 1923 (which in parts is very close to the 1919 *Jaarverslag*); and BENISO material. Annual reports and jubilee histories of several of the companies also include references to the JSV and VJSP.

stayed neutral, Java sugar's main markets were in Asia. The initial effect of the War, by cutting German and Austrian beet sugar sales to England, had been a boom for Java sales through the English government. The buying into England was through the government's Royal Commission on Sugar Supply, the selling from Java mainly through the long-established British trader Maclaine, Watson & Co.¹⁹⁷ In 1915 and 1916 high profits for the Java sugar factories came from immediate delivery sales at up to twice the previous prices and from orders from future harvests. In an example of government taking benefit from the industry, these profits were later subject to a War Profits Tax from the Dutch government. However, overall the war-time sales situation deteriorated markedly. The submarine war and other restrictions on shipping enforced by combatants reduced the amount of sugar that could be physically exported. First it filled the transit warehouses at the sugar ports, then the increasing surplus from subsequent harvests had to be stored at the factories, which had to build costly storage facilities. The possibilities, regularities, and assumptions in the network of the existing export system threatened to collapse. The European sugar traders operating from Java had combined to try to obtain as much shipping at as low a price as they could. The Japanese traders had flourished relatively in the now major exports from Java to Japan by using Japanese shipping, which gave them preference. In contrast, the booming network of large and small Chinese traders, many who were recent speculators, had been hit badly. Bankruptcies, failures, lost credit advances and unfilled contracts had become normal. Some sugar contracts had been "sold" several times to a sequence of collapsing and non-paying traders, entangling and bringing down both individuals and companies in the trade and also the structural assumptions of the trade itself. A crisis faced traders, banks, and producers, particularly focussed on Semarang. There had also been long breaks in telegraphic communication between Java and the Netherlands,

¹⁹⁷ Wellenstein & Krause 1932: 23.

while imported fertilisers, other materials and machinery had become very difficult to obtain.¹⁹⁸

The 1918 planting was voluntarily cut back as a management response to reduce the excess supply, subsequently taking a couple of years to be restored. This reduction was about a fifth overall, with some factories not planting at all. There were wide variations between factories, including between those managed by the same company. For example, the planted area at *Bandjaratma*, still with the lowest production per hectare of the Colonial Bank factories, was cut back by forty per cent at the same time that *Manishardjo*'s area was slightly increased. The former's employees were paid a supplementary bonus, to compensate for the reduction in the profits from which their share was calculated, while profits of others, such as at *Manishardjo*, had been increased.¹⁹⁹

Collective management moves attempted to try to bring the previously unregulated operations of the market under more systemic and stable control. In 1917 an initial attempt was made by large producers to unify representation in the market. They organised a voluntary Java-based cartel, the Java Sugar Association (*Java Suiker-Vereeniging, JSV*), to try to sell the still unsold stocks. This was not successful. It attracted a small majority but not a dominant share of the producers. The upper management of important producers, such as the HVA, the factories related to the largest Java sugar trader Fraser, Eaton & Co and most Chinese factories, refused to join. There were also complaints that the JSV leadership lacked expertise that its management was split, both in its opinions and between Semarang and Surabaya. The

¹⁹⁸ The Governor General Van Limburg Stirnum also took steps to try to obtain and coordinate as much of the available shipping as possible, applying an export against import licence system, to assist the import of food from SE Asia and the export of Indies commodity crops. The Dutch government's trade agent in Singapore was also put under his authority. A major break in telegraphic communication with Europe, from October 1917 to February 1918, was due to the British government's banning of Dutch use of British cables in response to the Dutch government having allowed German transport through the Netherlands of Belgian sand and gravel (Locher-Scholten 1981: 64-6, 97).

¹⁹⁹ ARA 2.20.05 Koloniale Bank. InvNr 1001. Inkomende Mail Suikerfabriek "Bandjaratma" (1917-1922). Letters KZ No 13648, 8/5/1918; Confidential 1814, 7/8/1918; and Confidential 1880, 8/1/1920.

JSV failed, neither restoring the price, which fell further in the first half of 1918, nor clearing the accumulated stocks.

A wider cooperation was then sought between the sellers and the producers. However, many of the Netherlands-based owners, now organised in BENISO, demanded that BENISO must be included as their collective representative in price negotiations. Separate and competing developments took place in the Indies and the Netherlands. In the Indies, at the end of July 1918 the Governor-General, convinced that smaller companies would collapse, organised a Palace conference of the major bankers, exporters and producers.²⁰⁰ At the conference a committee was appointed to design a single combined selling organisation. The committee, comprising representatives of the HVA, Kooy & Co, and the exporter Maclaine, Watson & Co, quickly proposed the statutes and regulations for an Indies-established joint body of producers and exporters to operate a centralised system of supervision, export-licensing and minimum-price setting. Two days later, on July 31, a provisional Advisory Sugar Committee was set up, with the HVA, Kooy & Co and Fraser, Eaton & Co, replacing Maclaine, Watson & Co, as its members. In the expectation that the Committee would be formally registered, the Indies government provided a Government Adviser for Foreign Trade Opportunities to it. The system was immediately started up to try to clear the unsold stocks and prices did increase.

Nevertheless, although the HVA was centrally involved in this still-provisional scheme in Java, it was opposing parallel moves in the Netherlands. It effectively blocked discussions there between BENISO and the London-based traders Maclaine & Co²⁰¹, by refusing to be part of a combined producer-exporter body. This, despite the fact that such a scheme had been accepted at a combined meeting of Syndicate representatives and BENISO management on July 6. Maclaine & Co had estimated

²⁰⁰ It appears that the Governor-General himself saw his role as more crucial, central and compelling in the setting up of the body and its minimum-price setting than just organising the conference (Locher-Scholten 1981: 96-7).

²⁰¹ Maclaine & Co was the original British company of which Maclaine, Watson & Co was the Java arm. The latter had been called Maclaine & Co when it first established in Jakarta in 1825, two years before becoming Maclaine, Watson & Co.

that at least ninety per cent of the production would have to be controlled by any such body if it were to be effective. This meant that the HVA's refusal to include its more than ten per cent was fatal. The HVA declared that a centralised system combining producers and exporters was not necessary but, as a start had been made in cooperative activities, offered to draw up a draft plan for a cooperative contract between separate associations. On July 29, a small committee was set up under an NILM Director. It quickly proposed an association of only producers. On August 9, the proposal was agreed to by BENISO. The new Java Sugar Producers Association (*Vereeniging van Java-Suiker Producenten, VJSP* [or *VJP* or *Visp*]) was established. In response, the trader Maclaine & Co proposed a cooperative system, with the exporters monopolising sales of the 1917 and 1918 harvests through the prior and still existing association, the JSV, in agreement with the new one, the VJSP. This was not acceptable to BENISO. An alternative plan of cooperation from the HVA was offered to the exporters, but refused. BENISO then sent a telegram to the Indies, cancelling the plan for close cooperation with the exporters that was currently operating there under the temporary Advisory Committee.

In addition, metropolitan-colony tensions were apparent. The Indies government wanted the new association to be established in Java, under Indies law and with its own involvement through its Advisor. BENISO objected, preferring a Netherlands' establishment that cut out the Indies government, which had previously demonstrated its potential interventionism and likelihood to act against what BENISO considered were its interests. No agreement could be reached, the Indies-established Advisory Committee was disbanded and all Indies government assistance stopped. The representative office of the Amsterdam-established VJSP was set up next to the NHM branch in Surabaya, but had to move out temporarily into the nearly completed new Syndicate building while the NHM building was being expanded. Its statutes and policies were not officially registered until July 1919, but this delay mainly demonstrated the problems caused by the unreliable, often impossible, postal communications between Java and the Netherlands by this stage of the War. The first

copy sent from the Netherlands in October never arrived. It was suggested "they probably landed at the bottom of the Mediterranean".²⁰² The Surabaya-based representatives had to wait until the end of November 1918 for a second copy and the official minutes of the establishment meeting. As soon as the VJSP was operational, the relatively recent contracts that had been made with the JSV were abandoned and it was liquidated.

The representative VJSP was a creation of the upper managements organised in BENISO to act as their companies' sole representative in the export market. Its control was in the hands of company not factory management, mostly of the largest companies, and it was legally based in the Netherlands although its operations were based in the Indies. The management of the VJSP in Java was carried out by a Committee of Representatives housed in Surabaya. This had a membership corresponding to the parent VJSP in the Netherlands, the NHM as president, the NILM and the HVA as members. It also had an Advisory Committee, made up from owners of factories legally established in the Indies and from representatives of those legally established in the Netherlands. Of the seven members, one was Chinese, The Toan Ing, who owned *Tjandie* and *Porrong*, but he did not take up his seat.

As with BENISO and the Syndicate, the VJSP was a voluntary association based on calculated advantage by members. For an owning company, membership was an acceptance that the selling rights for all sugar produced by its factory or factories would be transferred to the VJSP. This would then represent member producers collectively as their selling agent in a new, near-monopoly, relationship with the exporting traders. The formation of this sales cartel was a management choice to standardise and cooperate rather than to compete in the export market. Acceptance prevented a company from developing marketing and distribution of its own product.

Most companies, including nearly all the European-owned factories but not the Chinese, chose to become and remain members. The owners brought one hundred and

²⁰² *Jaarverslag der Vereenigde Javasuiker Producenten van de oprichting af te ulto 1919* :2

sixty factories into membership of the new system, about ninety per cent of the total and all but half a dozen of the European factories. Twenty six stayed outside, to the irritation of the Association as it considered the non-joiners were profiting from the more stable and healthy price climate without contributing. For no apparent reasons this was expressed more about the Chinese non-joiners than about the Europeans.

There was a variety of reasons for not joining, mainly a close association with a sugar exporter. Tan Boeng Tjing's factory, which initially hesitated, offer to sell only its inferior product through the cartel but this was refused by the VJSP. Oei Tiong Ham's five corresponded with the VJSP through its European management representative but eventually did not join, continuing to export through the conglomerate's own trading and shipping Kian Gwan Trading Company. Fraser, Eaton & Co, the largest sugar exporter at this time, had consignment relations with four factories and apparently part-owned two of them. The four "Fraser, Eaton & Co factories" did not join the VJSP, continuing to sell directly through that Company. The two "Dinger factories" also refused, in spite of attempts by their financier Internatio. Two other factories, *Soekoredjo* and *Soemengko*, had been recently bought from their previous Chinese owners by Japanese companies, so probably used Japanese traders. Three others were in no position to join; *Tjidahoe* and *Tjiledoek*, which existed legally but had already been closed, and *Bandjoepoetih*, a tiny factory which was soon to be bought, closed and its planting absorbed by the NHM. The other nine were Chinese-owned. So, of the twenty five operating non-joiners, seven were European-, two Japanese- and sixteen Chinese-owned. In 1920 two others left; *Gedaren*, all of whose shares had been bought at a very high price by a Japanese sugar trading company, and *Djatipiring*, owned by the Kwee Zwan Hong Brothers.²⁰³

²⁰³ *Ibid*: Bylage Ib; ditto 1920.

D. CHALLENGES TO UPPER MANAGEMENT

(i) In general

During this stage of the industry's development ideological attempts to establish competing representations of the industry, generally of its management and of European and Native unions, became tools in the struggle between competing interests. Over the first two decades of the century the previously almost unassailable control by managers was increasingly challenged. Particularly after 1917, management was forced to respond to the demands of stake-holders other than share-holders. The change was mainly due to the changing balances of forces *outside* the industry itself,

In contrast, only rare public challenges appear to have come from share-holders. Company records to this time show only two such challenges provoked a managerial public response. Both came from managements of listed financing and management companies. In 1909, the Principalities Plantation Company felt moved to refute "anonymous circulars and tendentious writings over the value of shares ... which have perhaps alarmed bona fide shareholders". With its annual report it issued a summary survey of the accounts of the factories it owned completely or partly, and explained a rise in share prices on reprehensible share market manoeuvres by others. It then reassured shareholders of a brighter future. The second case involved Internatio. Its statutes specified that a larger than normal percentage of profits should go to the Directors if there were "excess-profits". During 1914-1918, when the dividends had doubled, the Directors' share had increased four times. Shareholders, indignant that the two Directors had been paid f.390,000 in 1916-1917, needed reassurance that this was deserved as the current situation demanded more than usual efforts from the Directors.²⁰⁴

²⁰⁴ Sipos 1992: 77.

Discussions about industrial-political concerns in the Indies commonly included references to European parallels and precedents. This tendency was noticeable in the minutes and letters from meetings of Administrators and the Syndicate, and in the contents of the newspapers published by Europeans and by Native radicals. Contact between industrial-political currents in Europe and Java was maintained through the movement of Europeans between the Indies and the Netherlands. From about 1913, this included a small number of socialists on political missions to the colony. Also, communications between the Netherlands and the Indies governments gave government-political considerations a wider frame of reference than the merely local. This wider context of reference included the increasing conservative-radical tensions in Europe after the successful Bolshevik and attempted German Revolutions and the briefly threatened Troelstra Dutch socialist revolution that quickly collapsed in November 1918. These various connections with Europe provided for the use of European models in the interpretation of local conditions. They also urged the then Governor-General, Van Limburg Stirnum, in his 1918 November Declaration to announce as desirable an acceleration in the moves towards some internal representative self-government and a significant autonomy of the Indies within a maintenance of an imperial relationship with the Netherlands with an official committee of enquiry into the matter set up immediately.²⁰⁵

(ii) The Government and the People's Council (Volksraad)

Management was facing increasing challenges from within the government administration. The continual tension in the Indies between government and business was particularly overt during the 1916-1921 Governor-Generalship of the liberal aristocratic J. P. Graaf Van Limburg Stirnum who was considered by sugar and other large industry management to be more than normally dismissive of their perceived

²⁰⁵ Locher-Scholten 1981: 75-84. This was in the immediate context of the apparently revolutionary but short-lived turmoil in Dutch politics.

interests relative to those of the Native population as political activities became increasingly polarised?²⁰⁶ Application of the twentieth century government's Ethical Policy for developing the Native population had encouraged in some European officials a stronger recognition of the interests of Natives who leased land or shared irrigation with the sugar industry. The industry also felt that local Native officials were increasingly acting in favour of local interests and against the interests of the sugar industry. Industry management complaints included dissatisfaction that land leased to factories for use in rotation to grow cane was leased again for other crops in the non-cane seasons. The industry alleged that this meant the land was less likely to be available for cane-planting preparation in time and interfered with the fertility of the soil. It also claimed that several ex-officials were among the writers attacking the industry in the press with the intention of pushing up prices or hindering negotiations about ground-leasing arrangements.

After about 1912, more overt political pressure on the government's previously self-defined engagement was added by the rise of the organised Native Movement. This was embodied predominantly in the Islamic Union (*Sarekat Islam, SI*). An earlier organization, Boedi Oetomo (roughly, High Endeavour), had been founded in 1908 but was mainly a restricted, cultural rejuvenation organization among Native elites. In 1911-12, the movement that would become the SI had been founded as the Islamic Traders Union (*Sarekat Dagang Islamiah*) in Surakarta after an unsuccessful precursor at Bandung in 1909.²⁰⁷ The range of its activities was quickly expanded as it stimulated, supported and provided structures and voices for the varied strands of the evolving Native Movement, in particular those of the emerging anti-colonial nationalist streams.

²⁰⁶ The basic account of the changing administrative and political relations of this period is by Locher-Scholten (1981: chap 2) in her classic collection on the Ethical Policy. The early ethnic polarising between major European and Native political movements is a major theme in Bosma's recent biography of Zaalberg (Bosma 1997: especially chapter VII, 'Polarisatie 1919-1923').

²⁰⁷ Adam 1995: 115-8, 121-4.

From early 1918 a protected arena had been provided for the public expression of opposition to European colonialising interests, including management practices in the sugar industry. In 1916, the Dutch government had decided to set up a representative consultative body in the Indies as a major part of its step towards opening and democratising the Indies polity. This was intended to provide a platform for the presentation and debate of policy issues by representatives of the Indies society and then to advise the Governor-General in his administrative-legislative decisions. This People's Council (*Volksraad*) was race-based with a membership partly government appointed and partly elected (on a very limited and distorted franchise).²⁰⁸ The tiny European parts of the population, a fraction of one per cent, were massively over-represented with a number nearly equal to the number of Native members. The Council also included a few, mostly Chinese, "Other Foreign Easterners". European members included government and conservative representatives as well as spokesmen for the small radical socialist parties. Native members included government officials, and radical spokesmen of the SI. Debate was public, and more or less unrestrained. In 1918 the first sitting of this People's Council demonstrated its potential as a protected platform for expressing extremely critical opinions on governance in the Indies in general and on conservative sectional interests, such as the sugar industry, in particular. By the second half-year sitting a pattern of vehemently antagonistic public debate had developed - with a solid alliance between the European socialists and the more radical Native leaders. These publicised a combination of socialist and anti-colonial interpretations and allegations. Some were direct attacks on the sugar industry, including claims that the whole industry should be either destroyed or nationalised. The Socialist Ir. Ch.G.Cramer promised at the end of 1918 to bring a proposal for nationalisation to the 1919 sitting, but apparently did not.²⁰⁹ The government took notice of the critical claims about the industry and met some of the

²⁰⁸ Eg. Van der Veur 1955: 304-8; Locher-Scholten 1981: 71-3. Associated with this step organisations which were overtly political parties were now allowed. The first were officially founded in 1917-18.

²⁰⁹ Syndicate Chairman Hirsch to BENISO Chairman Ramaer 27/2/19.

demands. In particular, it established a Committee of Enquiry into the Sugar Industry in 1918.

Several specific topics provided opportunities to attack the sugar industry in the People's Council. These included the leasing of land by non-Natives, the compulsory allocation of a profit-share to the owners of land leased by the factories, the regulation of labour conditions and the temporary replacement of cane-growing by rice in response to a feared food-shortage.

In its 1918 modification of the land-lease regulations (*Grondhuur Ordinantie*) the government reinforced its intervention into the negotiations between Native sawah land-owners and non-Native leasers, by providing for each Resident to investigate and review the minimum lease-prices, and for possible long-lease agreements of up to twenty one and a half years. These prices were gazetted by each Resident and reprinted as pages of tables in the *Archief*. They were based on the estimated value of the rice which could be grown on the land during the West and East Monsoon seasons, plus a component for restoring the irrigation and Reynoso-trenched cane-fields to rice-fields. The estimates varied between sub-districts, for example the average price for what was judged the highest quality land in Pasuruan Residency was nearly three times that for the lowest. In between, up to seven categories, further divided into sub-categories, guided the estimates. This topic provided a vehicle through which to articulate and publicly represent local Native interests against both individual sugar managements and against general representations of the European industry, capitalism and colonialism.

In 1907 the idea of compulsory profit shares for the Native owners of land leased by non-Native agricultural interests, importantly for sugar-growing, had been raised and rejected. In 1919 it was brought up again, but further considerations were postponed until after the investigations of the 1918 Sugar Enquiry Committee, which was due to report in 1921. Also, in about 1919 the desirability of regulating working conditions reached government debate and a committee of enquiry set up (with the

labour elements of the Sugar Enquiry transferred to it) but with little effect until later.²¹⁰ Both topics are further considered in the next chapter.

In 1918-19 the government publicly raised the possibility of compulsorily reducing cane planting in favour of rice, to avoid a threatened post-War food-shortage.²¹¹ This provided another major vehicle for potent attacks on the sugar industry in particular and colonialism in general. Through newspapers, at meetings, and in the People's Council (mainly by Tjokroaminoto, the Sarekat Islam leader) vehement attacks were made and publicised. The radical European factions prophesied, and the SI threatened, widespread disorder on sugar estates if reductions were not carried out. Sugar management spokesmen attempted to rebut the attacks using several well-worn claims: much more rice could be grown if done more efficiently and with more effort; existing but unused second crop opportunities could be taken up; rice could be grown instead of the other crops being grown for commercial contracts with Chinese, rich village leaders and others. The sugar industry also disputed the figures for potential shortages being used by the government, Native or other anti-sugar interests, claiming these were exaggerated and politically motivated. Complaints were made by the industry and its supporters if attacks on it appeared to assert or imply a race-war or otherwise overstepped the limits set by the government's political censorship regulations. Outrage was expressed at the use in attacks of language embodying generically anti-colonialist ideology. For example, "the sugar industry is a European industry, and as such already malignant". Also, they complained that criticisms of land-leases on the basis of opposition to large capitalists referred only to the "white race" and not to leasing by local wealthy Natives or Arabs, thus the criticisms seemed to be inciting a race-war. Management pointed out that a planting restriction would cause

²¹⁰ This was one element of the wider post-war move of the Van Limburg-Stirum Indies government into enquiries as preliminaries for possible social legislation in the interests of the Native working population (Locher-Scholten 1981: 100-105).

²¹¹ See Locher-Scholten 1981: 97-99 for a brief account of the Indies government's moves regarding its concerns over possible food-shortages during 1918-1921. There was also, of course, a huge amount of discussion about this among the internal and the public documents of the sugar industry's upper management.

great losses that would be felt in reduced Native wages, rail tariffs, supply purchases, taxes and so on, and would cut into all levels of the Indies economy. Management also threatened widespread legal claims for compensation if the land-use rights from its land-lease contracts with Native land-owners were infringed, and offered to provide rice and other supplies through factories. Nevertheless, in early 1919 a large majority of the Council voted to recommend that the government order at least a 25 per cent restriction. It also voted similarly in favour of a proposed export tax on plantation products, including sugar. In the stated opinion of the Syndicate Chairman, the government needed money and considered "the sugar industry to be a chicken with golden eggs".²¹² While the Syndicate lobbied the Indies government BENISO lobbied the Minister of Colonies in the Dutch government. In spite of this, in its 1919 considerations of the Indies Estimates for 1920, the Dutch Parliament recommended reductions. The Indies government changed its stated intentions several times, eventually deciding against a restriction. There had been dissent among senior officials. J. Sibinga Mulder, from late 1918 the Director of Agriculture, Industry and Trade, and Mr. Dr. Talma, Director of Finances, were reported as disagreeing with the more liberal Governor-General. These reports support the later contention by some that Sibinga Mulder, a Wageningen graduate and previous sugar factory administrator, had been sent to Java to provide some "balance" to the Governor-General's negative orientation to the sugar industry.²¹³ Talma's sympathies were clear when agreed to become the next Sugar Syndicate Chairman. Sibinga Mulder had been prepared, not only to give his opinion privately to industry representatives but also to advise them on tactics for public representations. His idea was to stress the damage to the Native

²¹² Reported by Hirsch to Ramaer 6/3/1919.

²¹³ Eg. Cramer, as quoted in *Oetoesan Hindia* 14/7/1922. Sibinga Mulder (1908, 1911) had previously written positively about the effects of the industry during his earlier career in Java. The announcement of his appointment had been a general surprise, even in the sugar industry (Bosma 1997: 315). During the subsequent internal Indies governmental debate over the desirability of government-set minimum wages he distinguished himself by asserting that there was now no need as they had already risen sufficiently. However other government officials and surveys showed this to be quite wrong and his opinion disregarded with some reprimand (Locher-Scholten 1981: 101).

economy if there were cutbacks. Several times he was reported as continuing to believe the cuts were not economically necessary, but had a political basis. However, he was also very critical about the industry's slowness to accept new attitudes about industrial relations and pay rates, and commented that very few factories were providing cheaper food. Hirsch, the Syndicate Chairman, attempted unsuccessfully to have him replaced.²¹⁴

The argument about planting restrictions provided for a year of fiery public representations and denunciations of the effects and interests of the sugar industry, which could be used widely in different strands of the Native Movement. For management, this episode provided further evidence that the Indies government had become too influenced by a combination of the Native Movement and those other interests (allegedly unrealistically liberal and ideologically socialist) antagonistic to the industry.

Plans to organise lobbying against the alleged anti-capitalist tendency of the Indies government administration were instituted at the highest management levels of Dutch colonial capitalism - organised initially through the upper management of the sugar industry, but later including other plantations, trading houses and machine factories. At a special BENISO members' meeting on 17 February 1919 the desirability of a general organising in the Netherlands of European business interests in the Indies was canvassed. The Chairman remarked that no help could be expected from the government, but a powerful cooperation of Dutch and foreign capital interests might be organised against the threats now facing them. C.J.K. Van Aalst, an NHM Director, supported this and suggested an association of interests in a Plantation Union (*Cultuurbond*), with the sugar industry, as the largest industry working in the Indies, taking the initiative. The threat to sugar interests was underpinned by tabled letters. One, from the NILM's Surabaya office to its Amsterdam head office, reported the proposed twenty five per cent reduction in cane planting without compensation, the

²¹⁴ Secretary Van Hasselt to BENISO Management 9/9/1920.

government having refused a repayment of lease-payment. The other, from the NHM Factory, reported that its offer of subsidised flour from Australia had been rejected. The NHM position was that the proposed restriction was for political reasons only, and declared it to be technically a "dispossession for public purpose" and so would expect compensation. They urged a strong protest to the Minister of Colonies. These objections, as part of the agricultural and trading companies' wider concerns about the apparent anti-capitalist, pro-Native and pro-autonomy inclinations of the Governor-General's Indies administration, were published in the Dutch press and in the Dutch government's main parliamentary Second Chamber in April 1919 during the annual debate over the Indies budget.²¹⁵

(iii) The Press

By early in the twentieth century the Indies press had become a more important commentator. The major newspapers for a general Dutch-reading and, to a lesser extent, those aimed at an Indonesian-reading subscriber market, plus a wide range of internal membership organs, were becoming more influential. The lifting of some government censorship allowed for much stronger criticisms on aspects of society, including of the activities of the sugar industry, particularly from radical Native and Dutch-language socialist papers. Some alternative representations of management in sugar were publicised. In one example, a radical Native paper claimed that a Dutch HVA supervisor insulted, hit and whipped people but the local police did nothing when this was reported to them. The paper declared that "some Dutch people behave like animals when they are here" and asked the provocative question "if the HVA has employees like this what does this do for the HVA's name?" The same issue carried another story in which an abusive Dutch employee (who it named) refused a Native

²¹⁵ Locher-Scholten 1981: 82-3; Bosma 1997: 309-10, 315. An assertion against the aristocratic Van Limburg Stirnum was that that he had a "deep disdain for the mentality of the colonial trade world" (Locher-Scholten 1981: 94).

land-owner's request for his rightful rent, while the Administrator avoided him.¹⁶ However, from 1914 it was a punishable offence to publish anything deemed to be "hate-sowing" against the government and any particular ethnicities. This could be interpreted to include attacks on European colonialism, and a succession of editors and journalists were charged, fined and imprisoned for varying periods.¹⁷ Nevertheless, after the establishment of the People's Council, reporting criticisms voiced in it by radical socialist or Native speakers was an effective and protected press technique. Control over major Dutch-language newspapers was recognised as potentially of significant political influence.¹⁸

(iv) The European sugar employees' union

Until early in the twentieth century most public representations of sugar industry management had been provided by management. Apart from some unfavourable depictions of its relations with Native land-owners and Native labour, it was presented from within the perspective of management ideologies and was referred to its interests. However, in 1905 an early proto-union representation of the situation for subordinate European employees was published. A remarkable Dutch booklet, published in Rotterdam and signed by the Malay or Indonesian name for an alarm drum,

²¹⁶ *Sinar Hindia* 31/12/1919.

²¹⁷ Maters 1998: 97-110. For extended treatments of the development of the press and its censorship see Adam 1995 (for the Native press until 1913) and Maters 1998 (more generally, from 1906). Descriptions and analyses of (mainly the Jakarta) Dutch-language press of the latter quarter of the nineteenth century and the first of the twentieth are major threads of the recent definitive biographies of the Dutch-born journalist, editor and writer P.A. Daum (1850-98) and the Indo-European journalist, editor and party organisation leader Karel Zaalberg (1873-1928) by Termorhuizen (1988) and Bosma (1997) respectively.

²¹⁸ In 1919 the NHM, the major shareholder in the company owning the *Bataviaasch Nieuwsblad*, much read by Indo-Europeans, had moved to dismiss its more radical editor Kiewet de Jonge by utilising the "bankruptcy provision" in his contract on the grounds of the dropping sales under his editorship. He left in June 1919 and was replaced in October by Zaalberg who was expected, and proved, to be more favourable to large scale capitalism not so much by overt support but by emphasising the dangers of radical Native nationalism and of socialism (Bosma 1997: 316-7, 319). In 1921 both the JSWB and the European sugar union bought or set up newspapers (see next chapter).

"Kentongan", vehemently drew a very antagonistic representation of management. The author used a mixture of moral and industrial appeals. Starting by urging parents who would let their sons leave to work in an Indies sugar factory to think again and resist misleading claims of the high wages paid there, the booklet ended with an appeal to "think of the beautiful slogan: Unity makes strength." The picture elaborated over the booklet's thirteen pages was of a harsh, exploited, and morally declining existence. This life would involve exploitation by domineering Administrators in their pursuit of profits for shareholders and the banks, glaring injustices, alcohol, awful working conditions, inadequate living and cultural conditions, and Native concubines.

Your son will gradually move to take a concubine, encouraged by the administrator's demand that he learn the language but there are no teachers, by his wanting someone to look after him, and by his colleagues' advice - but the concubine is the cancer of the Indies society. Although there are conflicting views about it, concubinage is widely accepted. (Kentongan 1905: 4)

The booklet further reported that a doctor speaking at the 1905 Surabaya Sugar Congress had suggested that a young man should not take a Javanese concubine - but a Japanese one, following which moral objections were raised in the local paper before the debate was closed by its editor. Furthermore, with a more overt industrial-political message, the author claimed that,

Shareholders prefer that employees doze off from gin and women as they are less likely to organise and demand better conditions. A workman in the Netherlands has, by solidly joining together, obtained an existence practically worthy of a human being but, far from your fatherland, in a colony, which gives you nothing, you will sit and think about the old days. (Kentongan 1905: 12)

The source and validity of this highly coloured portrayal is unknown. Its intended audience, circulation and influence on potential young Dutch employees can only be guessed.

Similar descriptions of a patriarchal and personalised factory management also appear among retrospective reports about conditions at this time. Wages appeared not to have been a general source of complaints. More commonly, complaints were about the way European employees were treated. Union members later recalled that Administrators' opinions and directions were absolute and extremely difficult to challenge. Employees' conditions differed widely between different factories with different Administrators. Housing conditions varied but were generally poor; wages varied and, apart from the case of Administrators, few could claim rights to a profit share. Promotion was irregular and unpredictable and salary increases depended on the whim of the Administrator. Even Sundays and feast days could be hard-working days and there were reports of employees working from six in the morning to midnight with no days off for over two months at the height of the campaign. However, it is difficult to ascertain whether these claims were generally true or only selective elements of the organisational ideology; the justificatory folk-lore of the Union?¹⁹

The Sugar Employees Union (in full *Bond van Geëmployeerden bij de Suikerindustrie op Java en Madoera*, more usually *De Suikerbond*) was founded in Surabaya in 1907. Most of its members were drawn from the European lower management and it was based on a hierarchy of factory, regional and central organisation.²²⁰ The debate over its founding regulations demonstrated that although from its beginning the members of the new Union professed a wide spectrum of political ideologies, they were not revolutionary ones. The Union's ideology and activities were moderate and employee-oriented. It accepted a capitalist system and the

²¹⁹ See Walraven's celebratory twentieth jubilee history, 'Uit of the Grij Verleden' (Out of the Grey Past), pages 45-88, in the *Indisch Courant's* special *Gedenknummer van den Suikerbond 1907-1927*. He also referred back to the same reports as in the 1905 *Ketongan* pamphlet (p57).

²²⁰ See *Het Voorlopig Bestuur Suikerbond* (1907a and b). For founding and early history see Walraven 1927. Bosma (1997: 149) has reported the important involvement of M. Van Geuns, chief editor of the *Soerabaiasch Handelsblad* ("supported by employers, read by employees") in preliminary activities, the chairing of its foundation general meeting then being elected its Honorary Chairman (also see Walraven 1927: 45, 51-3). Bosma commented on the roles of lower-trained Indo-Europeans and more highly-trained and secure Dutch-born employees in the Union.

existence of competing but interlocked interests in the sugar industry. The general impression gained from the Union's journal was of a loyalist organisation of employees, most of whom wanted to not radically change the system but only to improve their rewards from it. The terminology of class which was used reflected this ideology, with "employer" and "employee" as the normal class structuring in it. From reports of meetings it seems that a variety of political opinions were expressed but their range did not extend to radical socialist ideologies. The Union and its journal were run fairly openly. Strong criticisms of its handful of salaried Central Management Committee staff and the Committee's responses frequently appeared. Some employing companies were vehemently attacked in the journal.

For about ten years, the Union's relationship with higher management was mainly with individual employers rather than the umbrella Syndicate. Negotiations about wage and conditions were between employees and their particular employer's local representatives, such as the HVA, NILM, Oei Tiong Ham concern, or NHM, who owned or, for a fee, exercised management rights on behalf of others who owned the factories. It was apparently normal for employees to identify themselves, at least industrially, as "HVAers" or "Eschauziers" or "Oei Tiong Hammers", etc. Detailed information and analyses of various pay offers in negotiations with particular companies were reported and debated in *De Suikerbond*. Any reader of the paper, sent free to all Sugar Union members, would have been fully aware of the industrial-relations system and its variations throughout the industry.

Relations between different employers and their employees varied. The HVA, for example, was an uncompromising employer. Although many companies found attempted industrial agitation intolerable, the HVA actually broke off relations with the Union in 1919. This impression of the HVA also appears in the internal reports of the Syndicate and BENISO which show the HVA frequently took a more pugnacious line about things like responses to government taxes, recognition of the Native unions or pushing for changes in the organisation of the Research Station. By early in 1919 the Union and the HVA's local upper management were in such conflict that the HVA,

protesting that while not in principle opposed to the Union, would not accept the behaviour of the Union's Management. The company thus refused to recognise the Union. The Union, on its part, declared that accepting employment with the HVA was inconsistent with membership of the Union. The position of the HVA caused problems for employees when those in the Kediri region, dominated by HVA factories, wanted to find out what had to be done to restore relations. The Union could not get a response from either the HVA or the Syndicate. The HVA's position was not unique. In 1918, a European employee at the Colonial Bank's *Bandjaratma* was sacked by the Administrator for attempting to organise industrial activity. The Bank's Surabaya Agency approved the action and, in reporting the matter to its Amsterdam Head Office, provided an indication of middle management's opinion of the Indies government's attempts to accommodate the political challenges then worrying the industry: "India is not yet ripe for similar 'leaders' and the Government is much too long-suffering with elements such as [the radical socialist activist] Sneevliet".²²¹

The Union was more involved with individuals' complaints, single companies and questions of relativities than in general or combined actions. Support for individual members at individual factories was provided by the small paid Committee, either personally or through the Union's regular journal, *De Suikerbond*. The President in particular travelled widely. He visited most factories and published his criticisms of middle and upper managements. These criticisms included a fierce attack in the Union's journal on the Administrator of *Djatibarang* for allegedly unfair dismissal of a European employee. The affair provoked a court-imposed fine for slander. Other reports included some critical claims that the Syndicate publicly rejected. Initially some Administrators and upper middle managements had strongly opposed union

²²¹ ARA 2.20.05 Koloniale Bank. Inkomende Mail. Suikerfabriek "Bandjaratma" (1917-1922). Confidential 1813 2/5/1918. Henk Sneevliet was a Dutch radical socialist who had been sent out in 1913 to organise and propagandise on Java. He founded the *Indische Sociaal Democratische Vereeniging* (ISDV) in 1914 and edited its paper, *Het Vrije Woord*, until he was deported in 1918 for his propagandising among the military. The ISDV became the Indonesian Communist Association in 1920 and Sneevliet represented the Indonesian Communists at the Second Congress of the Comintern in Moscow that year.

membership, threatening dismissal and warning job applicants that membership was forbidden. The Besuki Department of the Syndicate decreed that they would not employ any Union member, drawing Union warnings published in several Dutch-language papers. In another case the strongly anti-union Administrator of *Olean*, who had several times been the subject of complaints in the union journal, publicly claimed that he exerted no pressure on his employees for or against membership. His lower management employees publicly endorsed his statement - but the journal subsequently published internal company letters proving the reverse. Nevertheless, some partial concessions were gradually gained from employers. In a 1909 case *Kooy & Co*, which managed several factories, started to offer bonuses to new employees. However, this was only a small step towards all that the Union had demanded. The proposed bonus was not a fixed percentage of profits but was to be decided yearly at the shareholders' annual general meeting. Other important concessions, such as rights to free Sundays, leave after the campaign, or overseas leave after a fixed number of years were not offered. This was a disappointment to the Union who had hoped for more from S.E. Ramondt, Kooy's Director. He had previously offered to help arrange an arbitration committee to resolve the Besuki dispute over union membership. In other notable cases concessions the HVA and the Colonial Bank started pension funds for their European employees, in 1913 and 1916 respectively.

At least half of all the roughly 2500 European employees were members of the Union during its first decade.²²² By 1918 this number had dropped but during the 1919-20 industrial struggles nearly all joined up. Before the dispute intensified, the Syndicate Chairman Hirsch hoped to drive a wedge between what he called the "hot-heads" in the leadership of the Union and the majority of the employees. He instituted an unobtrusive investigation into Union membership. At the time he had found that membership was less than half of all employees. This proportion rapidly rose to most

²²² Walraven (1927: 61) refers to there being 2300 employees in 1907.

as the Union's campaigning intensified and produced results.²³ By this time, W.A.Th. Burger had become the Union's President and H.J. DeRuyter its Secretary.

There was a dramatic and influential leap in sugar's sale-price after the end of the War in Europe in November 1918 brought a surge in export sales, mostly to European countries. With their own sugar beet industries temporarily destroyed, these countries looked for imports just as more shipping became available for the trade. Sale-prices continued to rise, increasing about fifty per cent from October 1918 to the beginning of 1919 then doubling again by the middle of the year. After a temporary fall, prices shot up again when America re-entered the world market as a buyer following poor harvests in Cuba. In 1920 prices nearly doubled again from the previous high point of mid-1919, falling sharply to less than a fifth of that peak before recovering somewhat by the end of 1920, to the price prevailing at the beginning of 1919.²⁴ This price instability was used both as ammunition by European lower management and Native workers and as protection by upper management in the outburst of industrial strife in 1920.

European employees' profit shares (*antiemes*) had been cut by the low sugar prices and profits and accompanying cutbacks during the later war years. By the end of 1918 there were increased employee demands for compensation through raises in their basic wage rates to make up for the lower profit shares, now deemed to be of lesser value in their total income. In a separate push, the Union President proposed the creation of joint industrial committees comprising representatives of directors, administrators and employees, on a new Dutch model. The Syndicate rejected this request. In late 1920, the idea was put forward in a modified form. "Company councils", giving equal representation to employer and employees should be established under a "neutral" chair.²⁵ Hirsch, the Syndicate Chairman, believed that

²³ Hirsch to Ramaer 10/4/1919, 6/4/1920.

²⁴ *Wellenstein, Krause & Co* 1932: 27.

²⁵ This was an extension of the recommendations from the government's 1919-20 Labour Committee of Enquiry which had just completed its report to the Governor-General (although the report's concerns had been predominantly with Native employees and their employers). (Locher-Scholten 1981: 104-5). Also see Jas 1921 for further information on these councils.

although the government saw itself as an appropriately "neutral" adjudicator, its recent history proved it was anything but.²²⁶ This proposal also foundered.²²⁷ The Sugar Union approached the Syndicate to negotiate a general wage review. The Union's position on the relative importance of wages and bonuses had changed. As sugar sale-prices rose again the wage demands were maintained and a retention of the previous *tantieme* benefits was added to the union's demands. The rapidly rising cost of living and the known huge rises in export prices and company profits added impetus and determination to the employees' demands.²²⁸ The wider political unrest in the Indies over rising prices but not wages had underlain the government's launching of several committees of enquiry into wages, costs and labour relations in 1919, a year after the setting up of the sugar industry enquiry, with the potential of government intervention through social legislation.²²⁹

This was the first time collective upper and middle management was forced to respond to a general industrial demand from its European lower management or Native employees. Conventionally, the Syndicate's representational authority did not cover the internal affairs of companies, which included wages and conditions of employees, and nothing in its statutes or regulations specifically provided for action in this case. However, ideas were changing among both the Directors in the Netherlands and their representatives in Java. In the middle of 1919 most of the upper management personnel in the Netherlands were still opposed to accepting the restrictions on managerial freedom that a general standardising of wages and conditions would impose. Tests of feeling among the Directors at June and September meetings of the

²²⁶ Reported in Ramaer's circular to BENISO management committee members 7/12/20.

²²⁷ Sugar Union President Burger to Syndicate Chairman Hirsch 27/2/19. When De Ruyter had met the BENISO committee on 6/7/1920 he had proposed a council with equal representation of the Syndicate, the European Sugar Union and the PFB Native union chaired by a neutral chairman. He had been told that, although formation of any such council was up to the Syndicate in Java rather than BENISO, the recognition of the PFB that this version involved was not acceptable. (Ramaer to BENISO management committee 19/8/1920)

²²⁸ See CEI 15, 1994: Tables 3C, 3D showing annual average city shop prices of many items in European domestic budgets.

²²⁹ Locher-Scholten 1981: 104-5. These were the first moves into possible social legislation made by an Indies government.

BENISO management committee indicated insufficient support for intervention. It was decided that it "would be better to not begin the business as indisputably Burger had the cleverness to forge a weapon he could wield from it."²³⁰

However, pressure continued to mount. In October the Syndicate set up a committee, the October 10 Committee, to work on the possibilities of producing a standardised scale of wages and of conditions of European employees across the industry. This required collection of information about current practices from all companies. Some were unwilling or very slow to respond and no great pressure was applied to encourage compliance. Nevertheless, agreement in Java and in the Netherlands was felt to be close by early 1920. Comparisons of current scales of the large companies had revealed only small differences and Directors of smaller companies realised there were industrial advantages in standardisation.²³¹ At a 28 January meeting of management representatives in Surabaya there were moves to accept the principle. The HVA's previously influential expansionist ex-Director P. Reinecke, now a Board Member visiting the Indies, was also present. At this meeting, a Gentleman's Agreement was made that no changes in European employees' conditions would be made without giving at least a month's notice to the October Committee. On 9 March another clause was added to the Agreement that urgent cases could be approved by the Syndicate's Chair within forty eight hours.²³² The activities of the October 10 Committee continued, although at such a slow pace that at times even the Syndicate considered it was not making progress. The delay did not seem to concern employers.

²³⁰ Minutes of BENISO Management Meetings 2/6/19, 12/8/19.

²³¹ See the two page tabulation, dated April 1 1920, attached to the "Gentleman's Agreement", in ARA 2.20.01 NHM. Inv Nr 9217. This gives the complete scales for the Principalities Plantation Co, Anemaet, HVA, NHM, NILM, Eschauzier, Internatio, Colonial Bank and Klaten Plantation Co (several with profit shares as well).

²³² "Ramaer versus NHM in zake 13 April Commissie" (Beoordeeling van het gerezen conflict tusschen de Nederlandsche Handel-Maatschappij en de 13 April Commissie, door leden van het Gentleman's Agreement gebaseerd op de hun slechts bekende feiten). (ARA 2.20.01 NHM Inv. Nr 9217).

New disturbances came from the demands made on behalf of Native employees before the start of the 1920 campaign (see below). As a response, in April the NHM's Jakarta Office, the Factory, proposed the setting up of a second committee, the April 13 Committee or "Committee of Three". This Committee, consisting of representatives of only the NHM Factory, the HVA and the NILM, was to propose regulations for the employment conditions of Natives. For reasons which are now unclear it was soon decided that this small committee would take over the work of the semi-comatose October 10 Committee in relation to European employees as well. It was assumed that the Gentlemen's Agreement from the former committee would continue to apply to its successor. However, a few days later the European employees at the NHM's West Java factories issued an ultimatum through the Sugar Union - they would all walk out if their demand for a doubling of their wages was not met. The NHM Factory broke employer solidarity in general and the Agreement in particular by accepting this demand - provoking understandable complaints from other companies.²³³ The NHM set out its proposals in the so-called "Factory-scheme", agreed to by the Union on behalf of its NHM members. Thereupon the Sugar Union refined its general wage claim to demand that the scheme be provided to European employees in all factories.

In early 1920 the Sugar Union decided to send a representative to the Netherlands, to add pressure on the employers. The Union hoped to add direct negotiations with the owners or Directors represented through BENISO to its intensifying negotiations with the Syndicate and the Union's actions on factories in Java. At the same time, the Union planned to widen its organised support and working contacts with other relevant Dutch and international unions, and carry out an indirect ideological campaign, by publicising its interpretations through the press. After delays, the Union's Secretary, DeRuyter, was sent to Europe in the middle of 1920.

This decision was reached just after the Syndicate's April 13 Committee proposed a European wage scale based on the Factory-scheme. Most significantly, it

²³³ *ibid*; the Chairman of BENISO, Ramaer, also referred regretfully to this action by the NHM in his circular to BENISO management committee members, 3/7/1920.

also proposed dividing most occupations into two classes. The first would be for employees who were well-educated (roughly, those "with diplomas from Dutch institutions") that is, those employees with likely prospects of further promotion and working in the larger, more technologically demanding factories. The second was for employees who had mainly or entirely learnt their skills on the job (so-called "simple empiricists"), were more likely to have reached the limit of their career advancement and were working in the small, simpler factories. It was suggested that the two-classes provided for differentiating any Javanese or Chinese overseers of small factories' harvesting field-work from educated European employees who were currently carrying out similar work but would be subsequently climbing up to the more expert field supervisor positions.²³⁴ The wage-awards for the first class in each occupational category were close to the Factory-scheme, but the second's were well below. An alternative version of the scheme was to establish two scales, one for the larger modern factories based on the NHM scales, the other for the smaller, simpler ones. As well as immediate financial consequences, this scheme was seen as having longer-term racial implications. The Union rejected this two-class system, partly because of concerns about the threat to the Indo-Europeans. Because most of the less-educated were Indo-Europeans they were likely to be in the second class, which would be opened to more direct competition from more educated Natives.²³⁵ The Union broke off negotiations in Java with the April 13 Committee, that is, with the Syndicate, and declared it unacceptable as a representative of the employers. Further, the Union wrote to all companies proposing direct negotiations with each of them about their employees, and issued an ultimatum that strikes would start in mid-July. The Union gathered statements of active support from the other major European private employee unions in Java and also from the fledgling Native sugar employees union, the PFB (see

²³⁴ Referred to in the letter proposing the two-class system sent from the Salary Committee of the Syndicate to the Central Committee of the Sugar Union, copy enclosed with material circulated to the management committee and members of BENISO 18/8/1920.

²³⁵ *ibid*; Hirsch to Ramaer 1/7/1920 and 3/7/1920. Also see the editorialising "M K heft ongelijk", *De Suikerbond* 1/12/20, esp. pages 1304-5.

below). As one response, most of the major companies agreed that no striking European employee would be taken on by another company until after the expiry of his current employment contract.²³⁶

De Ruyter left for the Netherlands at this time. On his arrival, he arranged publicity for the Union's representation of the situation through the Dutch press and was advised by telegram from Surabaya to seek support from the international seamen's unions to boycott the shipping of Java sugar. Reportedly, the news of this in the press depressed the value of sugar-related shares on the Amsterdam Exchange.²³⁷ A meeting was organised with the Management Committee of BENISO, as representative of all the major companies. De Ruyter wrote later, "I was taken into a sombre meeting hall, hung with large portraits of "sugar-greats" and consorts. At the horseshoe-shaped green table were twenty distinguished-looking gentlemen with countenances to match, with here and there visible "decorations" such as great-capital-power gentlemen like to wear; ...".²³⁸ Its Chairman, Ramaer, had suggested that he should handle all negotiations rather than each member dealing individually with De Ruyter.²³⁹

The meeting was reported to have taken a conciliatory approach and ended in agreement. Committee reports contrasted De Ruyter's reasonable manner with the aggressiveness of the Union in its declarations and publications. The recent setting up of the Pension Fund for employees, paid for entirely by the employers, then the doubling of its benefits from fifteen to thirty per cent of the employee's previous wage was brought up as an example of the employers' goodwill. Ramaer made the important ideological assertion, mixing class and colonial elements, that in Holland there were still differences between the intellectual worker and the ordinary workman and in the Indies not only was this also the case but "the European intellectual worker must be a

²³⁶ Reported by Ramaer to BENISO management committee 26/6/1920.

²³⁷ De Ruyter 1921: 5.

²³⁸ *ibid.*: 18.

²³⁹ Ramaer to BENISO management committee 17/6/1920.

friend and colleague of the employer"²⁴⁰ A general agreement was accepted with the Factory-scheme as a basis and the two-class scheme rejected.²⁴¹ Further discussions about details of the ranges in wages for some categories and about the bases for calculating tantiemes took place between the Committee and De Ruyter.

However, the BENISO/Syndicate plan to set up a new employers' industrial body was concealed. BENISO sent a telegram to the Syndicate in Surabaya about its wages decision, while De Ruyter telegraphed to the Union in Surabaya that he had seen this telegram and the negotiations with the Syndicate should be restarted on the basis of it. But he had not been shown the second part of the telegram. This included the opinion, agreed before he arrived, that BENISO could not yet approve the immediate setting up of the proposed Employers Association in the Indies as further considerations on its statutes and regulations were still needed. The imminent establishment of this body was thus kept secret.

The need for the proposed employers' union was expected to become less pressing when the Sugar Union accepted BENISO's revised wage proposals. But, almost immediately, other demands were raised in Java. Profit-shares, hours of work, leave, disciplinary procedures, and horse allowances were all debated. Also, suggestions that the European Union would move to closer support of the fledgling Native union increased the urgency and the JSWB (see below) was quickly set up and authorised to represent all employers.

In its responses to the European Union, upper management had the advantage of secrecy, in addition to collective solidarity, finance, and legal or other technical expertise. It could maintain confidentiality about its own planning and expectations of

²⁴⁰ See the detailed notes of the meeting as reported in De Ruyter 1921: 19. Also see Ramaer to BENISO management committee 7/6/1920.

²⁴¹ This quickly proved to have disadvantages for some employees. News soon came to the Syndicate that a small factory's Administrator had appointed a temporary European employee on the low salary of f.75 then, on discovering that the new minimum for the position was f.200 and deciding the new man was not worth this, had sacked him. When the latter complained to the Sugar Union its Chairman had written explaining that this was the agreement and there was nothing it could do. In Hirsch's opinion, this demonstrated why the Union should have accepted the 2-class system. (Hirsch to Ramaer 29/7/1920.)

its opposition, while knowing about theirs. There was little possibility (or desire) for the Union to keep its activities and plans secret. Competing ideologies among the Union's members made continual public description and discussion, at meetings and through its journal, of its leadership's policies and actions, necessary to maintain sufficient membership support. There was not a radical element which might have operated secretly. Upper management could thus easily monitor the Union's activities and be as well-informed as it chose to be. In contrast, the activities and planning of upper and upper-middle management itself could remain hidden. A copy of the occasional report or minutes of meetings that were circulated could be leaked and fall into the hands of potential opponents. On a couple of occasions, Hirsch complained that material which had been intended to be kept within Syndicate circles had fallen into the hands of the Union, even using the greater security of a private letter to Ramaer after the contents of one of his normal "Syndicate Chairman to BENISO Chairman" reports had somehow been shared in Java. However, it was usually safe for upper, upper-middle and middle management, the Administrators, central organisation executives, Agents, Representatives, and Directors in the Indies and the Netherlands, to assume that any opponents, including in governments, could be kept from knowing their private information, opinions and plans - including their current beliefs both about their opposition and about the opposition's expectations of them.

(v) Upper management and the organising of collective representation in industrial relations

The Syndicate had demonstrably failed as an organisation for upper management to meet the political-industrial demands in the new collective bargaining environment. This had been an increasing concern for some time. Until about 1918 the Syndicate had defined itself as *not* representing management in labour relations. In 1910 this had been clearly laid out, both in its official representational history and in its current work programme, which portrayed it explicitly as not having a part to play in the

employment relations between its members and their European employees. In other words, between the upper or upper-middle management and the middle and lower management employees. The official history had emphasised the existence and functions of the Assistance Funds for Administrators and Employees of Java Sugar-factories and the Java Sugar-industry Employees Union, the Sugar Union. Both, it was asserted, were more appropriate bodies to attempt to improve and regulate the conditions of European employees than the Syndicate, which might assist or advise them. Similarly, proposal of regulations for improving housing, care and assistance in case of sickness, or provision against the effects of accident, age and invalidity would be better investigated and carried out by them, with the Syndicate giving advice in particular cases. Working towards the establishment of any standardising conditions of service such as salaries or discharge, even minimum ones, was deemed not an appropriate function of the Syndicate. This policy had been maintained although it was recognised that standardisation had often been called for by employees and was probably a useful principle to avert many of the unnecessary and not infrequent labour difficulties.

Moreover, it was emphasised that these considerations related only to the European employees. It was claimed that there were no significant or general difficulties in relations between factories and their permanent and casual Native employees. Consequently, there was no need for the Syndicate to consider any policy to regulate these.²⁴² Nevertheless, employers did experience some difficulties in obtaining and retaining Native labour. In particular, the enforcement of work contracts, especially preventing Natives from taking advance payments and then disappearing, was a continuing issue. In 1909 for example, there had been discussions with other plantation associations about proposals that could be put to the government which was considering Native employment contracts at the time. Other enquiries and suggested policies were circulated within the Syndicate before and after that.

²⁴² *Archief Bijblad* 1910: 1069-1120.

Well into the 1910s no significant and wide-spread major industrial problems appeared to have been remarked on by the managers. The Syndicate's 1915 report asserted there was nothing that it had needed to be involved in concerning "the workforce". Until the 1917-18 report, the only reference to European employees had related to educational concerns. These referred to the subsidy for the new sugar course at Deventer, and to an expressed hope that an extension course, particularly tailored to the needs of the sugar manufacture, could be added to an existing school in Java. They did not involve active support for the ideas. Social-technical topics were noticeably absent among considerations of the Syndicate's Departments, *Archief* or Congress. Human relations management was not an area which the Administrators chose to discuss publicly among themselves, or to make proposals about to others. As mentioned already, for a decade after its 1907 formation, the European Sugar Union had not appeared to be active or strong enough in widespread activities to have provoked much, if any, change in this determinedly non-industrial self-definition of the Syndicate. Seemingly unavoidable needs to increase pay and conditions for European employees were due to increasing technical demands, and had been recognised for several years for Native workers where the local labour market forced this. It was handled at the local factory level or by individual management or owning companies. For example, the Syndicate's 1914 report had mentioned that

"higher demands were being made on European employees than previously so account must be made for this in their salaries. [Also Native] Labour wages are gradually going up; because of the enormous expansion of the plantations in general over the recent years, in spite of the increase in the population, the relation between demand and supply of the workforce is wholly changed. Especially in the areas where old, very closely adjacent plantations have expanded within their existing zone with no or practically no more field workers, day wages continue to rise. The wages of foremen, skilled workers, in general the Natives who don't belong to the "unskilled labour", are increasing

equally or even more. The yearly writing-off of advances to Native personnel (without which advances it is impossible to obtain or retain them) are steadily larger; by the improvement of means of transport the old attachment of the Javanese to his *desa* [village] is on the decline, so that there is an increase in the trackless disappearances without repayment of the advance. The Syndicate's proposal to bring in service books for all skilled workers and to not employ any who have left elsewhere with their advance had not been successful for practical reasons. Only with adjacent plantations of one Company could such a system be carried out. (Syndicate annual report 1914: 8.)

This had not been the first attempt at a systematic and objective identification of individual Native workers for labour control purposes. A similar contract control system of registration and identification booklets had been tried by planters in West Java in cooperation with a Bandung company in 1910 but had failed²⁴³ Although replacing manual labour by machines in the factories was proving successful in most cases, Syndicate-assisted attempts to supplement or replace an inadequate work-force in the fields by mechanisation had so far proved unsuccessful. Machines available for ploughing were effective in some soils but cost too much to purchase and operate²⁴⁴

Until about 1918 the absence of effective industry-wide representation of either employer or employee had appeared satisfactory to both sides. The sudden rise in organised general demands and activism broke this comfortable equilibrium and the Syndicate leadership recognised its own unsuitability as an effective representative of employers' industrial-relations interests.

Given the lack of powers of internal discipline over its members there was little that the Syndicate could do collectively in response to the organising of resistance to employers by European and Native employees. It lobbied government privately and tried to manipulate definitions of the situation publicly. It also provided administrative

²⁴³ *Archief Bijblad* 1910: 535-40.

²⁴⁴ See Appendix 19.

information-sharing support to its members as they tried to identify potential or previous "trouble-makers" among their employees. This was mainly in regards to permanent Native employees (see below).

From 1918, strengthening in 1919, there were proposals for the setting up of a central sugar employers' industrial relations body in Java with authority over its members from, among others, the Syndicate Chairman Hirsch. At least as early as the beginning of 1919 he had publicly espoused a small, central, nimble and dictatorial body in Java which could act as a single voice for the employers. When the Java Sugar Employers Union (JSWB, see below) was finally set up in September 1920, he and Van Harreveld Jnr, its new Secretary, commented that if this been done two years before, millions could have been saved, strikes prevented through wage-improvements, and the PFB would never have attained such strength or been given any credit for achieving the rises.²⁴⁵ There were several precedents in the Netherlands, but among the managements of the Java sugar industry such a representational organisation had been resisted as an unwarranted interference in companies' internal affairs and independence. Nevertheless, its advocates saw it as necessary to prevent European and Native employees playing off individual factories, especially neighbouring ones, against each other, and to prevent the isolation and defeat of a single factory by concerted European or Native personnel. In one strong advocacy, the "Company to operate the estates left by Mr. W.A. Baron Baud" aggressively proposed to the BENISO Management that when a factory that already paid adequate wages was threatened with striking by revolutionary urges of the Native and/or European personnel, it should not accede to these demands, but should close. The owners of other estates, whether BENISO members or not, should compensate it for its losses and should attempt to mill as much of its cane as possible, with whatever was too young or too far away used for cattle feed or burnt to keep it from use by the striking employees. The other factories would also pay for seedlings, if they could not be provided from the existing

²⁴⁵ Hirsch to Ramaer 6/4/1920.

planting. If a factory is closed, it would be decided by agreement between the Directors and the Administrator if the European employees should be discharged or not. At a general members' meeting on 29 April this proposal was considered but deemed to be premature. In part, this was because it would first need an established and disciplined employers' organisation. Nevertheless, the need for such an organisation, which would have the necessary power and authority to act in the collective interest, was recognised, and the Syndicate's taking of advice from Mr. Smissaert, ex-Secretary of the Dutch Employers Association, about the setting up of an employers' association was welcomed.²⁴⁶

Importantly, such a body would provide for the faster decision-making now necessary in the Indies. This was proving impossible when any significant negotiations required individual factory's, company representatives' or overall Syndicate's reports and opinions to be sent to the Netherlands, to the companies, or to BENISO for sending out to its members for consideration, before discussion and a decision could be returned to the Indies. The situations in the Indies, including the moves by "enemies" whether in unions or the government, were changing too quickly for management arrangements that required informing and seeking approval from the Netherlands to be adequate. A BENISO members' meeting was called for 17 February 1920 to consider the Syndicate Chairman's first written request, three months previously, for a general policy that factory Administrators could make anti-striking mutual assistance agreements. Chairman Hirsch also believed that the Syndicate's representational authority was weakened when any decisions it made either had to be sent back to the Netherlands for approval, or its company-representing committee members could not commit their organisations to decisions until they had consulted with their Directors or owners in the Netherlands.

The employers eventually responded to the effective industry-wide organisation in 1919-1920 by the European Sugar Employees' Union by setting up a corresponding

²⁴⁶ BENISO annual report 1920: 11.

industry-wide "struggle organisation", the Java Sugar Employers Union (*Java Suiker Werkgevers Bond, JSWB*). It was finally designed and approved quickly in discussions within the Syndicate after consideration of other employers' organisations in Java and the Netherlands. F.J. Gentis of Kooy & Co had a major role in this, and the details, including its statutes and regulations, were formulated after advice from several sources such as the NHM in Amsterdam, Mr. Rübenkoming, and Jhr. Mr. Smissaert.²⁴⁷ The JSWB was officially set up by the management meeting of BENISO in July 1920, after notice of its acceptance in the Indies was received from the Syndicate and the BENISO members' factory Administrators. Its stated aim was

the promotion of unity in the labour relations and labour regulations of the Java sugar industry and the promotion of all which can contribute to the securing and maintaining of calm development of the industry. (Stat. Art. 2)

A majority of the BENISO factories joined the JSWB at its start, the others formally joining over the next few months. Its constitution determined that the Chairman of the Syndicate should be its chairman and the now-ailing Hirsch added this role to his other responsibilities, assisted by a Secretary, J. Van Harreveld.²⁴⁸ Also occasionally referred to as Van Harreveld Jr., he was appointed at f.1,500/month.²⁴⁹ He had been in an administrative position in the Agricultural Division of the Research Station, headed by Dr. Ph. Van Harreveld, while also acting as the secretary of the JSWB's informal predecessor, the April 13 Committee.

The JSWB had an inclusive voluntary membership and large advisory council, but normally operated through a small central committee. Voting rights were the same

²⁴⁷ Rübenkoming was the Chair of the Principalities Agricultural Association, replacing Van Hasselt who was now with BENISO; Smissaert was the ex-Secretary of the Dutch Employers' Association and currently visiting the Indies to provide advice.

²⁴⁸ Van Harreveld was sometimes referred to as Van Harreveld Jnr to differentiate him from Dr. Ph. Van Harreveld.

²⁴⁹ By comparison, at the time the salaries of all the consuls of the new and precarious Native sugar workers union, the PFB, totalled about f.12,000 annually (Ingleson 1986: 198). The Chair/President, Vice-Chair/President and Secretary of the European Sugar Union had been paid f.500, 400 and 300/month in 1907 (subsequently rising).

as for BENISO, proportional to planted areas. Majority decisions were to be binding on the minority and kept confidential?²⁵⁰ In practice, the JSWB central committee was essentially a continuation of the April 13 Committee, formed a few months earlier by the HVA, NHM and NILM to negotiate the demands of the Sugar Union, plus a senior management representative of the Eschauzier Concern. It was through the April 13 Committee that the first major industry-wide agreement had been reached between the Syndicate and the Union. The employers' part was then taken over by the newly established JSWB. The JSWB also became the target of the political, industrial and governmental efforts to have the PFB recognised as the Native trade union, long refused by the Syndicate. The latter dropped out of the industrial picture as the JSWB replaced it.

The JSWB's first task was to finalise the employers' side of the negotiations over a standard wage and conditions agreement with the European employees' union. These steps were in the same direction as the Indies government's moves towards following the Netherlands' model of regularising employer-employee relations. The previous year, when the government had set up a Labour Committee of Enquiry its Chairman had expressed his desire for a system similar to that in the Netherlands with employer-employee relationships regulated by formal work-contracts. Burger, of the European Sugar Union, was among the original Committee members, Soerjopranoto, leader of the short-lived Native union (see below), was added later.²⁵¹

The JSWB was established to standardise managements' industrial relations with its European staff. As well as pushing up below-normal conditions, the JSWB policy was also used to pull down above-normal ones. The JSWB Committee was of the opinion that making any exceptions would lead to new action by the Sugar Union. The HVA, which had previously been seen as "a very good-paying concern", had accepted the general conditions without demur. In contrast, one factory (*Poerworedjo*) which had been slow to join the JSWB was quick to leave when its application to pay

²⁵⁰ See Hirsch to Ramaer 1/7/20; Van Hasselt to members of BENISO Committee, 18/8/20).

²⁵¹ Hirsch to Ramaer 12/4/19.

above-JSWB rates was refused. Its Administrator stated that it needed to provide better conditions. It was a single independent factory so could not provide attractive promotion possibilities like employers owning several. Also, it had been set up in a new area where, because there was not a tradition of local Native employment in the sugar industry, workers had to be brought in from elsewhere and supervision was consequently more demanding. The JSWB allowed an extra f. 50 for the latter, but otherwise pointed out that there were many independent factories with the former problem, refusing to make an exception for this case.²⁵²

The JSWB's initial authority was soon widened slightly, to include disputes about rights of Administrators as employees. The Syndicate and BENISO Chairmen supported this in a case of what appeared to be unfair treatment of an Administrator by his Director after he had made concessions to Native workers, who had subsequently behaved in such an unruly way that the European employees had all threatened to resign.²⁵³ This extension put a newly legalised element into the continual wider tension between ideological representations of European personnel as "management" or as "employee". Within a year or two there were further legal disputes about which taxes could be taken out of profits before Administrators' profit-shares were calculated.

The HVA proposed that the standardisation of industrial relations through the new JSWB management system should be extended to companies' other plantations. It requested that the European employees on its fibre and tapioca plantations in the Kediri region be included, arguing that they were already in a common employment system with the sugar plantation employees, that the plantations were in an integrated operational zone, and that these other employees had been used by the HVA to support their sugar employees in the opposition to the recent Native labour troubles. The BENISO secretary strongly opposed this, including pointing out there would be other similar situations elsewhere.²⁵⁴

²⁵² Letter from JSWB to BENISO Chairman, 11/1/1921.

²⁵³ Ramaer to BENISO Management 9/9/1920.

²⁵⁴ Minutes of JSWB meeting 19/11/1920, including reference to BENISO Secretary Van Hasselt's letter.

The JSWB also produced a policy for profit-sharing among European employees. Hopes were expressed that the "most burning questions" were now solved. It was believed that

these solutions would improve the public opinion of the sugar industry, considered important as thereby disturbers of the peace of the industry's activities, whether of European or Native background, would not be able to count on public sympathy as had been the case during the previous campaign.

(Sec. JSWB to Chair BENISO, 11/1/1921)

As a necessary basis for its role the JSWB started to collect and use employment-related data. It carried out annual industry-wide surveys of Native employees from 1921 and, once only, of the qualifications and work histories of European employees in 1923. This collection provided a previously non-existent source of information for managements in the industry. It was not a simple task. A few months after its founding the JSWB's Secretary was apologising to BENISO's for not yet having produced statistics on labour conditions. He explained that it was difficult to find proper statistics in the country about company records, especially Native businesses, and there was a general suspicion about government statistics.²⁵⁵ The collection, for which an Economic-Statistics Section was established, also provided for subsequent systematic annual and other public reporting of statistics representing the sugar industry as a major contributor to the Native economy and state finances of the Indies (see the next chapter).²⁵⁶

The setting up of the JSWB marked a crucial step in the management of European industrial relations in the Java sugar industry, shifting it to the system that had been evolved in the colonising Netherlands and urged by the government in the colonised Indies. Negotiations about European management employees were thereafter

²⁵⁵ JSWB to BENISO 28/10/1920.

²⁵⁶ The legally-qualified Mr. J.J. Tichelaar was appointed to both head this new Economic-Statistics Section and to replace VanHarreveld Jr. as Secretary of the Agricultural Division of the Research Station.

between two organisations, the Sugar Union and the JSWB, each collectively representing their members. The upper management of most companies now delegated much of the direct involvement in setting European employment conditions, referring them to those agreed collectively through the JSWB structure. In this the JSWB Management Committee (*College van Bestuur*) comprised only the Chairman of the Syndicate/JSWB and representatives of the NHM, HVA, NILM and the Eschauzier concern. The Supervisory and Advisory Committee (*Commissie van Bystand en Advies*) included representatives of seven other owning/management companies and the Administrators of five factories.

These major frameworks for new longer-term industry-wide agreements involved wide consultation within management. This is demonstrated in a progress report of the process of defining a common method of calculating the profit on which employees' profit-shares would be calculated. At the time of this report, the beginning of 1921, the JSWB's Management Committee had produced a proposal which had been unofficially agreed to by several of the large companies, followed by obtaining and collating of the opinions from some accountants. The opinions of company Directors in the Netherlands and the Indies had been taken into account, through a prior survey. The required technical formulation was expected from the accountants, and a meeting with them and the visiting BENISO Chairman was imminent. It was expected that an approved policy from this meeting would also be approved by the large Committee of Supervision and Advice of the JSWB, and then used as a basis for negotiation with the Sugar Union.²⁵⁷

(vi) Management responses to organising of Native challenges

From the the early 1910s management had been operating in a changing political climate. The increased radicalisation and militancy within the Native Movement had

²⁵⁷ Van Harreveld, Secretary JSWB, to Ramaer, Chair BENISO, 11/1/1921.

included challenges to the practices of the sugar industry?²⁵⁸ The Dutch-language *Het Vrije Woord* (*The Free Word*) of the revolutionary socialist Indies Sociale Democratische Vereeniging (*ISDV*) used a two-class Leninist representation of capitalism and imperialism in general and so the sugar industry in particular. Similarly, Indonesian-language papers such as the continuing *Neratja* (*Balance*) and *Sinar Hindia* (*Ray of the Indies*) or the short-lived *Soeara Boeroeh* (*Workers Voice*) routinely defined the industry in terms of the working and the moneyed classes ("Kaoem Boeroeh" and "Kaoem Oewang", or "capitalist"). The attacks were interpreted by Gentis, Director of Kooy & Co, as being "a systematic hate campaign against the sugar industry which the government not only doesn't oppose but plays the gentleman by adopting a weak standpoint so the industry is the football of the politicians, ...". He claimed the interests being served by the campaign for cane-planting reduction were not those of the smaller man in the villages, but the richer - the lurah and hadji who gladly exercise the usury trade?²⁵⁹ The radicals provided anti-capitalist, anti-colonialist representations of the sugar industry as antithetical to the interests of the Native population. These representations included support for actions against the industry's use of fertile land, the rent it paid and the water it used, its general relations with the population, its labour relations, and its sending profits out of the Indies. In one notable representation, an article by Semaoen described the sugar industry as "a cold-blooded, refined murderer". Hirsch, as Syndicate Chairman, took outraged exception and suggested prosecution and gaoling. The Governor-General responded to receipt of a copy of the article by calmly pointing out he already knew of it, from its translation in the government's regular survey of the Native press.²⁶⁰

²⁵⁸ Relevant Native Movement leaders included Tjokroaminoto, Soerjopranoto and the younger, more revolutionary, Semaoen and Darsono. For more discussion on Semaoen's work see Dewi Yuliati 1994.

²⁵⁹ Minutes of Syndicate Management Meeting 3/1/19. The lurah" was the village (desa) chief, the term "hadji" (literally a Muslim who had made the ritual trip to Mecca) was commonly used by Europeans to refer to a locally wealthy and influential Native in rural areas.

²⁶⁰ "Een Intellectueele, geraffineerde moordenaarsbende; Suiker terrorisme", *Sinar Hindia* 25/1/19: 1 (Oddly, the paper was Indonesian-language but the title of the article was in Dutch.)

There had also been reports of increased "criminality", violence and thefts, especially on European plantations, and of burnings of village houses. In late 1918 hundreds of incidents were cited by Schmutzer, the conservative, sugar-connected, *Politiek Economische Bond (PEB)* representative in the People's Council. The appointed Socialist representative Cramer also referred to "uprisings", "fields in flames", and "attacks on employees", but he attributed this squarely to "the people being against capitalism in these lands". In his speech he mentioned that the recent SI Congress had proposed increased struggle against the sugar industry, and that there were "powerful currents in the direction of class-organisation of the workers and farmers aiming to end the might of capital". In a report on major examples, the Syndicate cited several large-scale thefts of cane, some which occurred in broad daylight and involved intimidating Native cane-cutters and their European supervisor.²⁶¹ How to respond to the increasing level of unrest in the fields had become a continuing topic in management's internal discussions and negotiations with government. Common in management reports from factories, companies and the Syndicate was reference to the level of resources and effort put into government-provided, factory-funded or unpaid-village guarding, and the adequacy or otherwise of local court punishments - of which time in prison was used as the main indicator. Management started to contribute directly to guarding their own property. For example, in December 1919 the estates in the Kediri and Yogyakarta Residencies set up field guarding systems of "plantation police" (*cultuurpolitie*), trained and commanded by government police officers but paid for by the estates.²⁶² Some factories set up shooting ranges for their European employees.

In 1917-18 most of the criticisms and activism by the Native Movement had been concentrated on issues about use of land, not of labour. By 1919 there were new moves by elements within the general Movement, its mass organisation still within the

²⁶¹ Transcription from the Peoples Council debate 16/11/1918; Syndicate annual report 1919/20.

²⁶² *De Indische Courant* 10/12/1919, 24/12/1919.

framework of the SI, to set up active labour unions. Most were set up in a few cities by the small group of radical socialists. The influence of the latter is not clear. Their numbers are now unknowable but probably were not large. Predictably they were not high among voters in public governmental elections where the franchise was very restricted by position or wealth. Even in the "red city" of Semarang, in spite of a series of public meetings, the candidates of the radical combination of the ISDV and SI won very small numbers of votes at the Municipal Council elections in 1918.⁶³

One Yogyakarta-based union was set up for the permanent Native employees of the sugar factories, the Factory Workers Union (*Personeel Fabrieks Bond, PFB*). Also with the Javanese name Prawiro-Pandojo Bjoeho and based in a smaller organization that had been operating in only the local Residency, it was established in Yogyakarta in 1918, with the aim of "superintending the livelihood, the assets, the external as well as the inner conditions of its members".⁶⁴ The PFB campaigned for official recognition by management as an industrial union, more respectful treatment of Native workers, and increases in wages and conditions. However, mixed with its more limited industrial claims were more radical assertions and promises. These were utilised in dismissive ideological representations of it by management. The founding Chairman of the PFB, Soerjopranoto, titled "The Famous Strike King" on fund-raising photos, was also involved in what was sometimes titled the Revolutionary Socialist Federation of Native unions (*Vakcentrale*). He was its leader at an early stage before its complete take-over by the radical left.

The PFB's agitations for better conditions industry-wide, and a central place for itself in a formalised industrial relations system, were blocked. The Syndicate represented a collective public refusal to recognise the PFB as a legitimate industrial organisation. This was led by Chairman Hirsch's declarations, notably in his June 1920

⁶³ *Sinar Hindia* 30/7/1918.

⁶⁴ See its Statutes, and Soerjopranoto, "Personeel-Fabriek-Bond di Djokdja (P.F.B.)", *Sinar-Hindia* 21/1/1919: 1. For a fuller account of the founding, operations and decline of the PFB see Ingleson 1986: chap IV, and Shiraishi 1990: 109-113, 187-8, 193-7, 204-6, 208-9, 213-4, 220-4, 236, 242.

speeches to the People's Council on which he was now the sugar industry representative.²⁶⁵ An unwavering assertion that the PFB was not based in the factories, but was an unacceptable revolutionary organisation using exaggerated industrial demands for camouflage was publicised. Opponents also suggested that the PFB was more a private organisation of Soerjopranoto's than really based in the factories.

In fact, the maintenance the Syndicate's representation became increasingly precarious. At the end of July 1920 Hirsch wrote from the Syndicate to Ramaer at BENISO that "the situation was getting worse by the hour", as the successes of the Europeans' wage campaign encouraged the Natives to increase their demands. He said that he was

intending to use his second term of office in the People's Council to continue to speak against revolutionary actions of the PFB but would hold the door open for the PFB to negotiate if only on the grounds of the economic advantages of employees, and would try to get Soerjopranoto in through this door - but people don't want this - [we] will have to put more money on the table. (Hirsch to Ramaer 29/7/1920)

Individuals and organisations within the Syndicate's shell argued for a relaxation and acceptance of the legitimacy of the PFB's self-defining claims, and voices from outside the industry criticised the Syndicate's stance. Behind the united front of the employers were differences at factory and company levels. Some Administrators negotiated increases in wages and conditions with local committees that had identified PFB involvement, whereas others refused. The HVA continued to hold and promote a hard-line position, while the NHM came to favour recognition. The HVA repeated the arguments against recognition in a letter to Ramaer on 16 July 1920. The NHM claimed in a telegram to him on 17 August 1920 that Hirsch's claims in the People's Council had been wrong even though he had not been publicly refuted. At a BENISO

²⁶⁵ Hirsch 1920a, 1920b. Hirsch had been appointed to represent the sugar industry after the Syndicate had decided that using an existing PEB member was inadequate.

meeting on 29 July 1920 the large companies essentially accepted, for pragmatic reasons, that the PFB might gradually have to be recognised. The actual decisions about if, how, and when, they agreed, should be left to "our friends inJava". That is, to the new JSWB. This consensus was a notable reversal of the trend in managerial decision-making. Previously decision-making power was gravitating towards upper management in the Netherlands. Henceforth, significant industrial relations powers were being returned to middle management inJava, with the JSWB accepted as the deciding industry body.

Although Hirsch himself reported privately that he did not expect the public position could be continued, in spite of his personal doubts he continued to do his duty by expressing it strongly and apparently confidently in public as, for example, when the Governor-General, during a private conversation, suggested that the Syndicate reconsider.²⁶⁶ Although the government clearly rejected the Syndicate's public claims about the nature of the PFB, the Syndicate calculated from its inside information that the government would not allow unlimited disruption of the 1920 campaign because this would damage the economy, overall and locally, and hence its own tax receipts.²⁶⁷ This proved correct. Satisfying some of the local demands for improved conditions, sometimes with and sometimes without government involvement (see below), was enough to end the strike wave and the PFB. Although there had been widespread gains in Native employees' wages and conditions the PFB leadership gave notice of a general strike if the Syndicate continued to refuse to recognise it. A government enquiry in the Principalities, the previous heartland of the PFB, indicated an absence of general support for this new threat. The government decided that the PFB had moved from an economic to a political struggle organisation, banned the threatened strike as being a political strike, instructed its Residents to be ready to act strongly against any such

²⁶⁶ Locher-Scholten (1981: 103) reports that the Syndicate's resistance was little valued in government administrative circles.

²⁶⁷ Ramaer to BENISO Management 17/8/1920. Also see Shiraishi 1990: 205-6, 223-4.

activity and to inform their local PFB organisation of this. The strike was called off by Soerjopranoto the PFB leader at the last moment.²⁶⁸

The Syndicate was also involved in setting up systems for industrial relations surveillance and intelligence. Previous attempts had been unsatisfactory. An outraged report in the radical Native press in 1919 stated that the HVA had requested photographs of artisans newly employed by others' factories, to find if they had been among those involved in disturbances at its *Djatiroto*.²⁶⁹ There was no existing general management system for securely identifying individual Native workers and keeping records of them, so a new one had to be created. An identification system based on photographs had been tried and, given the technological resources of that time, found unsuccessful. However, based on experience in Europe, it appeared that a system based on finger-prints could be successful. A Dactyloscopic (Finger-printing) Bureau was investigated and suggested by Hirsch at the beginning of 1919. This was expected to be probably too expensive if the intention was restricted to identifying the few agitators or ring-leaders, but could be cost-effective if a more general coverage of the permanent Native work-force was wanted. Initially, it was taken up by the Yogyakarta and Solo Departments of the Syndicate then, after investigation by others, the initial system was expanded to provide a Syndicate-administered service for all member factories at the beginning of 1920.

On the Syndicate's recommendation, BENISO agreed in mid-1919 to covertly finance a private and secret intelligence-gathering and information-providing service set up by the *Politiek Economische Bond* (PEB). This service included the spreading of counter-agitation information around factories. Later, the Syndicate set up its own small secret intelligence gathering service. The PEB was a conservative political party with Native and European members, organised and led by Engelenberg, an ex-Resident. However, the secret funding of a requested f.500 per factory was exposed in the Dutch-language radical socialist press (*Het Vrije Woord*), then reported in its

²⁶⁸ Locher-Scholten 1981: 103-4).

²⁶⁹ *Sinar Hindia* 30/12/1921.

Indonesian-language equivalent (*Sinar Hindia*). The Syndicate's service was under the personal control of its Chairman Hirsch. In part, it was based on his collating information sent to him from the Administrators, but also involved appointing a selected but anonymous European to gather and evaluate information. Shortly afterwards, when this man took up a government position, there was a temporary dependence on his Native assistant while another European was sought. The records reveal no more after this until the JSWB started issuing its reports (see next chapter).

More generally, the central Syndicate remained an information and lobby organization. It collected and collated information about industrial concerns sent in from the factories and companies' offices, reported to BENISO and made general submissions to the government, newspapers, and other interest-holders in the Indies. It was not directly involved in negotiations at factory or inter-factory levels. The Syndicate involvement at these levels would be by its Departments, mainly still in the hands of Administrators and local representatives of companies.

Management now also had to deal with state intervention in industrial relations. In response to the rising and spreading unrest, at the beginning of April the central Indies government had instructed the regional Residents, as part of their general duties and powers to maintain order and calm, to investigate and produce settlements in sugar factories in their Residencies.²⁷⁰ In some cases, they or their Assistant Residents made enquiries about factories in their region and, based on these, accepted or proposed improvements in conditions at individual factories. Other Residents intervened more generally in negotiations.

A notable example of government intervention was in the Yogyakarta Residency. The local Residency-based Department of the Syndicate believed there was more strife with the Yogyakarta-based, and locally Soerjopranoto-led PFB in their area than elsewhere. It came quickly to favour recognising it and possibly negotiating separately from the rest of the Syndicate. By April 1920 they had set up a committee

²⁷⁰ Locher-Scholten 1981: 103.

of three Administrators to draw up a draft agreement standardising employment conditions of Native employees other than wages rates. This committee produced draft regulations based on a more limited agreement recently drawn up by the little, Schmutzer family-owned and administered, *Gondang Lipoero* factory and its own association of employees. This was the first example of such a work-contract. A copy of this agreement was also given to Soerjopranoto by the Resident in the latter's efforts to arrange a negotiated settlement between the local management of the industry and the PFB.²⁷¹ After discussion, the draft was accepted by all Administrators in the Department. A copy was sent to the April 13 Committee, which was then considering the same topics, as well as minimum and maximum wage rates, on behalf of factories in the rest of Java.²⁷² The local management move to more standard wage rates in the Yogyakarta Residency was promoted by the local Resident, following the government's policy and his own concern that the PFB demands were moving beyond simply economic to political intentions. He also provided confidential information about the internal tensions and weaknesses of the proposed union action to the local industry management.²⁷³ The Resident required all factories to provide him with information about the wages and conditions of their Native employees, especially in relation to the 1914 rates which were widely used as a cost of living base-line. He also held discussions with Soerjopranoto and with the overlapping Syndicate Department/Principalities Agricultural Association. His actions reinforced a belief among management that he was intending to impose a minimum standard of wages and conditions by regulation, and to announce this at a meeting he had called with the factory Administrators. Management feared that these regulations could conflict with those expected from the imminent JSWB which its factory-members would be obliged

²⁷¹ Minutes of Syndicate Meeting 21/5/1920.

²⁷² Enclosed in Ramaer to BENISO Management Members 2/9/1920.

²⁷³ See Ingleson 1986: 178-9; the original account in Rübening's letter to Ramaer 8/5/1920, reporting on his meeting with the Resident; and the JSWB telegram, about a secret report via the Resident of Djocja and the HVA, that the Native union Federation was frightened the threatened PFB strike would not succeed and this would reduce the income needed to pay the salaried Federation administrators (Ramaer to BENISO Management 16/8/1920).

to follow. The plans for this central employers' body had still not been revealed outside the Syndicate. On the day it was formed, a worried Administrator rang the Syndicate from Yogyakarta to report what he believed the Resident was about to do. The secret of the JSWB was revealed to the Resident and the Syndicate's First Secretary rushed from Surabaya to Yogyakarta to confirm and elaborate. The proposed regulatory system satisfied the Resident and the Administrators' meeting with him was held in a more relaxed mood. At this meeting it became clear that there was already more wage consistency between factories than there had been earlier. In fact, all were within the limits recommended by the Syndicate's Yogyakarta Department. Moreover, the job classifications used, although needing a little more refining, were largely consistent across companies and also close to the PFB demands. Apart from pointing out some errors in the 1914 figures and some current inconsistencies, the Resident was willing to accept the current level of standardisation and its imminent replacement with a new JSWB scheme. The Administrators agreed to correct the figures and adopt a standard occupational classification so the questionnaire the Resident was going to circulate could be effectively filled in as the basis for a 'Yogya Contract'.²⁷⁴

Collective management's refusal to formally recognise the PFB helped keep the industrial actions of Native employees at the local level. They did not achieve industry-wide representation as the European Sugar Union had. Permanent Native workers were employed by the Administrator at each factory with direct industrial negotiations at this level of management. The limits were set higher up in the company. Most of the available records relate only to the central levels of the Java industry, and show what was being done or not done at that level. However, most direct management responses to industrial challenges continued to be met by the Administrators at individual factory level.²⁷⁵ Administrators could be working in horizontal cooperation with other

²⁷⁴ Rübenkoning to Ramaer 23/7/20.

²⁷⁵ A series of articles in 1921 by the head of the JSWB's new Economics-Statistics Division gives extensive statistical and descriptive information about the strikes and responses (Tichelaar 1921b). Individual cases are mentioned in the Syndicate and company annual reports.

Administrators with whom they had already made emergency arrangements for things like Native employee strikes through discussions across local, Departmental or wider areas. For example, by 1920 there were formal Anti-Striking Committees at Departmental level. One, with its own letter-head, included all twenty Cirebon, Tegal and Pekalongan Administrators plus five other European staff employees meeting fortnightly when necessary.²⁷⁶

At such meetings the ground-rules for mutual assistance had been worked through. Previously, inter-company differences had been enough to prevent Administrators calling on each other for help, but increased threats had pushed them into some cooperation. Agreements on coordination apparently became tighter and were adhered to. By early in 1920 the internal Syndicate record contains concerns and complaints about things like poaching of workers, and sudden wage increases or improvements in conditions without prior discussion with or even informing neighbouring factories, which were occurring even after in-principle agreement that such changes would be discussed. Management worried that strikes would be set off by incompetent and unjust treatment of Native workers and that offending Administrators would then call on other factories for support. They worried, too, that prior agreements to support each other would be broken. These worries were tackled when the Departmental or inter-Departmental level of middle management appointed a small local committee of other Administrators to make an immediate response to any call for help from an Administrator. This committee would investigate and decide if the strike was justified or not and, if not, arrange the support. The managing of emergencies at this level also provided for more factories to provide a smaller number of employees each, with consequently less disruption to their own operations and protecting them from sympathy strike actions. It also provided for arrangements for common reserves of potential workers or private security forces available to be called on if needed. For example, an on-call labour reserve of about four hundred was

²⁷⁶ ARA 2.20.01 NHM [Dossier Anti-Werkstaking Overeenkomst] InvNr 9228.

reported for the Semarang area. Separately Pa (Father) Van Der Steur, a Dutch priest who ran an orphanage and training foundation for poor Indo-Europeans ("Indos") at Magelang near Salatiga, had arranged about a hundred Native ex-soldiers under a retired under-lieutenant who could go to factories under strike, to "prevent irregularities".²⁷⁷ There were no further records whether these reserves were used.

It appears that most stoppages, and most disturbances which did not evolve as far as stoppages, were directly and locally decided with the PFB or SI coming in subsequently. They were locally solved by the Administrator, perhaps with crucial minor or major involvement of local government officials (see above). One particular exceptions included strikes of solidarity or sympathy with 6 sacked artisans. They were organised at two Principalities Plantation Company factories and threatened at all the company's other factories unless the six re-employed.²⁷⁸ Several cases of strike activity are recounted by Ingleson, whose summary strongly portrays the localism of decision-making with the central union officials as "outsiders", initiating organisation and subsequently attempting to "quench the fire of strikes called [locally] ... in the name of the union".²⁷⁹ Subsequent company reports praised the experience and skills of their Administrators who avoided or minimised disruption to production with pre-emptive or negotiated improvements.

In some cases the solutions could involve the Agents or Representatives of owning or managing companies providing guidelines, advice and support from factories owned or managed by the same company, but the direct negotiations were handled by the Administrator. Communicating between Administrators and Agents or Representatives in Java could be done in hours, while communicating between Administrators and Directors in the Netherlands took a minimum of one or two days by telegram or several weeks by letter, each way. The fuller reporting of a strike or

²⁷⁷ Hirsch to Ramaer 22/5/1919. Magelang and Salatiga were both military centres. The 1896-founded Magelang institution, which cared mainly for orphaned or abandoned children of soldiers, is described briefly in Van derVeur 1955: 65-6.

²⁷⁸ Minutes of meeting of Syndicate withRübenkoming, 21/5/20.

²⁷⁹ Ingleson 1986: 172-5, 181-7, 202-3.

other significant disturbance required a letter, which would reach Directors in the Netherlands well after its handling had been decided, and probably well after the situation had been resolved. For example, the letter from the Director of *Balong Bendo's* Company to the Chair of BENISO recounting the progress of a strike at the factory from 14-17 May 1920, which was based on the letter sent by the Administrator sent on 17 May had been written on July 2, just after the Administrator's letter had reached the Director. Waiting for informed advice or directions from the Directors of a company in the Netherlands would have been ridiculous. Unfortunately, the extent of involvement enjoyed by local Directors of Java-based companies, including those few family-owned and directed, is not now known.

Although some factories were stopped for short times, overall local middle and lower management maintained control. In many cases, at least some of the strikers' demands of wages and conditions were conceded, but factories refused to re-employ at least those considered to be leaders. Management had reserve resources, and the workers had few if any. In most places strike funds had not been collected or were insufficient to support striking workers.²⁸⁰ Neither they nor the organisations of the SI or PFB could control the wider supply of labour apart from limited intimidation and appeals to solidarity. Although the factories might be using a significant minority of the irrigated land in an area, they would be using only a very small proportion of the local population as permanent labour at any time. At any time there were many living close to the factories who Administrators could appeal to through their delegated Native or European employees. Moreover, Administrators could also call on other workers outside the immediate factory area, obtain help from other factories with whom they had previously made anti-striking arrangements, or have relief workers transferred from other operations of the same company. Potential replacements also included skilled workers from the cities, such as from Surabaya. Imported workers could be from nearby or, in some cases deliberately, from more distant factories in the same

²⁸⁰ See the detailed figures reported from fourteen local PFB branches at a, supposedly, secret meeting held by Semaoen in April 1919 (Hirsch to Ramaer 24/4/1919).

Residency Department. An example of management using strike-breakers from other nearby operations of the same company were the movements between the HVA's Kediri cluster of sugar and other plantations and factories.²⁸¹ Management's tactic of importing strike-breaking labour from distant areas was, in part, to diminish the likelihood of solidarity between them and the strikers. This was also the reason for using groups ethnically different from the majority of strikers, including Madurese, Menadonese or poorer Indo-Europeans.²⁸²

Locally, management could call on more resources than could their Native employees. Administrators could dismiss, demote, break accumulated years of service, remove extra conditions including cheaper food, turn an employee and family out of the factory-provided housing. On the other hand they could offer the positive inducements of extra pay, bonuses, gifts and preferment. Employees' resources were limited to refusal to work, then attempting to intimidate non-strikers and potential replacements by formal pickets or by activities in the factory Native housing areas or nearby villages. Their actions were limited to those which could not be deemed to threaten public order. Importantly such threats included causing serious economic loss to the treasury by large disruptions of major economic activities like a sugar factory. Threatening activities made strikers subject to government, police or even military sanctions.²⁸³ Intimidation was a tactic used by both sides in the competing attempts to maintain and to break strikes. Sometimes police intervened on the side of management to protect "willing workers" and factory property. A very few cases were reported of strike-leaders being imprisoned.²⁸⁴

Confidentiality as a resource was unequal between management and Native workers. Managements were often well-informed about the progress of what was being organised by Native employees. They could use information gathered through

²⁸¹ Braat annual report 1920-21:4; Ingleson 1986: 139, 187.

²⁸² Eg. Ingleson 1986: 144.

²⁸³ Eg. Shiraishi 1990: esp 206-9; Ingleson 1986: 187.

²⁸⁴ Shiraishi has described in detail the government's forceful interventions in the Solo Residency (Shiraishi 1990: esp.194-7, 203-7, 220-4). Also see Ingleson 1986: 174, 181, 185, 187, 205 fn 48.

government's official surveillance at public meetings of Natives, arrange spies at secret meetings, cooperative employees in factories, and the need for workers to communicate on a wide scale through meetings, circulars or the press before they could act collectively. An illustrative example of public surveillance was at the Native workers' propaganda and PFB recruitment meeting held at the Banyuwangi SI office at the far eastern end of Java, on 4 April 1920. In the audience were about sixty Native workers from a nearby sugar factory, workers from an oil company, about four hundred SI members and representatives of several Native organisations, including unions. Also present were the government's local Regent and his deputy, the police chief, the assistant prosecutor, the local government office chief, and several police officers. The scale of this official government presence was not unusual. In some internal cases, reports would be made to the Administrator or other European employees as a part of the public function of senior Native employees. Thus, they were a conduit between the mass of Native workers and upper management. In other cases, more secret arrangements were made. There could be suspicions among Natives that management would use informers, contrastingly defined by management as "trusted informants". In May 1919 the *Brangkal* strike involved most of the Native artisans demanding to be monthly paid, like half a dozen of their fellows. The Administrator claimed these had been singled out as being long-serving and diligent employees. In contrast, the radical paper *Oetoesan Hindia* claimed they had a lesser work record than others, and were spies - "Javanese thus being used against Javanese"²⁸⁵ Management did not need to reveal corresponding knowledge about their own plans and expectations.

Socialist Indonesian-language papers reported the commencement or continuation of industrial strife triumphantly, but often with little or no detailed information. Lacking resources of their own, they frequently published reports of events sent in days later, or reprinted from other papers. Nevertheless, readers of

²⁸⁵See *Neratja* 13/4/1920 for a report of the meeting. See enclosures in Ramaer to BENISO Management 24/5/1919 for reference to the strike.

papers such as *Neratja* or *Sinar Hindia* would be able to follow the progress of the 1920 industrial campaign at a general level, from the perspectives of its correspondents and those of the writers of similarly politically aligned Dutch language papers, such as the radical socialist *Het Vrije Woord*. The PFB's organ, *Boeroeh Bergerak* (*Workers on the Move*) published irregularly in 1919-20, sometimes provided more detail but was only published monthly and written mostly by its handful of editorial staff, from their union perspective and involvements. It revealed little of the direct experiences and interpretations of employees themselves, concentrating rather, on the self-reported activities and stated intentions of the union management. Perhaps significantly, it was published in Indonesian rather than in the Javanese, Sundanese or Madoerese which would have been the languages understood by the PFB's members. Therefore, as well as having to be read for them (as few workers were literate) it would have had to be translated before most could understand it.

Managements' superior resources became increasingly apparent. The Native workers' lack of adequate strike funds or alternative employment was indicated in strikers quick returning, seeking their old positions. However, management was likely to have now filled these with replacements. This situation then provided for further demonstration of power by Administrators, who could decide for themselves what to do. In one case, after advice from Directors, the Administrator declared that any return must keep the interests of the replacements as a first consideration. In another, at *Tjomal*, the local Assistant-Resident interceded on behalf of the dismissed workers who had been quickly replaced by workers from other factories. Allegedly, his intention in doing this was that workers would then see the government as more influential in looking after their interests than the union had been.²⁸⁶

The managements' Syndicate, and then its JSWB, did take on some involvement in members' collective industrial relations with Native employees. Although they would not recognise any industry-wide collective representation of

²⁸⁶ Hirsch to Ramaer 16/9/1920, 14/10/1920.

Native workers, they did provide collective policies about some Native employment conditions for their members. These were negotiated and decided among management, not involving any representative of the Native workers. Within months of the JSWB's foundation it was setting minimum and maximum daily pay rates, of forty to sixty cents, for the lowest-paid Native factory and field workers, in part responding to Indies government pressure for a standardised coolie, unskilled worker, rate.²⁸⁷ By early in the next year it was starting to consider bonuses or other profit shares for Natives.²⁸⁸ Nevertheless, although recognising the justification for increases for Natives as well as Europeans in the industry if future disruption was to be avoided, the JSWB continued to refuse to prescribe any standard wages and conditions for the permanent and more skilled Native employees. It deemed these to be a matter for negotiation at the factory level. By this means management avoided providing a basis for an industry-wide Native union of these workers. As Ramaer write to the BENISO management committee:

Now there have been increases to the Europeans' salaries there must be considerations to improving those of the Native personnel. Fortunately the great power of representation in the hands of the JSWB can be used to satisfy the rightful demands of workers. The push from the PFB has failed but there is a need to prevent a situation in which Native employees have conditions for complaint on the ground as otherwise an organisation like the PFB will gain strength. Therefore the JSWB is encouraging close contacts and negotiations between "natural" organisations of Native workers on factories and the Administrators. (Ramaer to BENISO Management 24/8/1920)

²⁸⁷ Telegram from the Syndicate to BENISO, reported by VanHasselt in his circular to all BENISO members 6/8/20.

²⁸⁸ See the extract from the draft minutes of the meeting of the JSWB committee 3/1/21.

Similarly, the JSWB considered setting a standard transport contract between factories and Native contractors, but decided this would be better left to a more decentralised system of cooperation between the "practici" in the factories.

E. MANAGEMENT AND ETHNICITY

(i) The relations between European and Native employees

In industrial relations ethnicity was used to the advantage both of management and European employees. Representations of industrial solidarity between Europeans and Natives were rejected by the Europeans. This reduced most employees' resources overall, while concentrating them for the small minority of Europeans. The previous century's ethnicsegmentations and asymmetries were continued. In any ethnic work relationships, Europeans were the managers, supervising and controlling Natives and receiving wages, bonuses (mainly profit-based) and conditions far superior and out of touch with the Natives.²⁸⁹ There were no relationships in which a Native had formal authority over a European employee or had better conditions. There were no reports of any European and Native employees' joint social life. It appears that European employees usually had little interest in Native workers, generally not feeling any industrial commonality with them. Until the tumultuous times around 1920 Native perspectives and interests had not been recognised or considered in the Union's journal. In radical Native publications European employees were represented as a hierarchy of overseers, not as co-workers.

For its 1919-20 struggle with employers the long-established European employees' union enlisted statements of support from the fledgling Native union. However, it then declined to support the latter in its own struggles for recognition and

²⁸⁹ For further information see Appendix 16.

improved conditions, although it did passively state its support for recognition. For example, at the Union Secretary De Ruyter's July 1920 meeting with BENISO and in other discussions and press statements he asserted that the European Sugar Union strongly supported the recognition of the Native PFB, but this was conditional on it acting only as an industrial union. At his meeting with BENISO members, in response to a query about the Union's position on the PFB strike at one factory, DeRuyter gave an opinion based on his understanding that the basic cause was the non-recognition of the PFB, leaving Native workers no other way to act. The enquirer revealed that he was a Director of the factory's company and that DeRuyter was quite wrong in his version of what had been the cause. According to this Director the conflict was due to the PFB demanding the reinstatement of a Native laboratory worker who had been swindling and falsifying. DeRuyter backed down, saying he had been mistaken and confused the situation there with one at another factory. However, he repeated his opinion that the Syndicate was making a mistake, believing that recognising the PFB could bring its gestures under better control. As he said:

[although the Sugar Union] opposed the Syndicate's refusal to recognise it as such the Union did not support all the PFB's actions, was overall neutral and would support only what it considered to be justifiable actions, opposing unjustifiable ones. The latter would be those undertaken for political and not economic purposes. (De Ruyter 1921: 23)

The ideological acceptance that such a differentiation could be made, and the criteria for doing so, publicly underlay the subsequent lack of support for the PFB's activities by the Union. Articles and letters in the Sugar Union's journal demonstrated strong opinions among European employees *against* a close alliance with the Native union and opposed the more moderate position of qualified solidarity from the Union's officials. The Syndicate and BENISO explicitly emphasised the ideology that the European employees', as promotable managers, shared more interests with the

employers than with radical Natives or European revolutionary socialists, who were trying to diminish or even destroy the industry.

The inherent ethnic tension of the hierarchical relationship between the European and Native employees is indicated in the setting up of the Syndicate's Accident Funds. The control of the Administrators over the Native employees, including their power to recruit and move strike breakers between factories, depended on a continuing willingness of the lower European management employees who directly interacted with them in field and factory. As the incidence of more rebellious behaviours rose this dependence was obvious. A more threatening mood with a consequently heightened feeling of peril in supervisory employees was reported. The situation for a European working as an isolated over-supervisor of several large groups of Natives in the fields was particularly subject to feelings of endangered exposure. On some factories guns were provided and shooting ranges set up for practice. By early 1919 it was widely known that the SI was going to encourage widespread unrest in the sugar industry if the government decided against their public demand for a reduction in cane-planting to provide land for more rice growing. In this atmosphere it was not difficult for the Sugar Union to request and the Syndicate to agree to the setting up of an Accident Funds for employees, with the sometimes explicit recognition that such a scheme was now particularly relevant because of the social unrest. In fact, the proposal was not a new or original one, the Union basing its proposals on the accident insurance scheme which had been established in the Netherlands since 1907. In early 1919, the Syndicate had approved the principle and passed on its recommendation to BENISO. The Accident Funds for Employees in the Netherlands Indies Sugar Estates eventually came into full operation in September, funded by the employers through a levy of a couple of cents per hectare. Both European and Native employees were covered, although the Natives, unless maimed and thereby easier to identify, and their

dependants were limited to cash payments, while the Europeans could be granted continuing pensions.²⁹⁰

There had been a decrease in the previously all-pervasive acquiescent subservience among Natives to Europeans. In the increased atmosphere of militant resistance to colonialism, management was concerned that Native workers were now more inclined to publicly object to what they considered to be unjust, ill-mannered or unacceptable physical handling by individual European supervisors. Several work stoppages were caused by such matters. In Syndicate discussions about the deteriorating situation, a common explanation by experienced Administrators was that some European employees lacked understanding and sensitivity in their management relations with Natives and this should not be allowed. One nostalgically asserted that it is

better to prevent strikes than break them. ... Most are due to the guilt of employees. [There is] a changed situation where the ex-employees of previous times are now missed; with the large number of staff changes there is no bond between employees and the work-folk. Much more could be expected from people who had cooperatively worked together with each other for a long time than from someone who had just come to the factory and often speaks the Native language inadequately. The so-desirable relationships between personnel and folk is not so much as before - and the Directors are guilty in this as they transfer the personnel all the time".(Minutes of Syndicate Management Meeting, December 1918)

However, another speaker at the meeting then counter-claimed that "the personnel forced the Directors in this. The Directors always find that the personnel prefer to work at the larger rather than at the smaller factories.

²⁹⁰ The nearly simultaneous discussions between the Union and the Syndicate about the industry-wide employer-funded age pension scheme (also set up in 1920) applied to Europeans only. See Appendix 16.

Nevertheless, it was also widely recognised by middle management that payment of wages that had not kept pace with the cost of living was the basic explanation of unrest, particularly with food and other costs having doubled or tripled. However, simply increasing Native workers' wages was not often put forward as the obvious solution for management. Various combinations of raising wages and providing cheap rice and other provisions were tried first instead. The Syndicate investigated the desirability of a large purchase of rice through the Syndicate itself on behalf of its members. Eventually, this was done by individual factories or by their management companies.²⁹¹ Subsequently, there were generally large wage increases, from twenty or thirty up to fifty per cent, accumulating close to double by the end of the 1920 campaign.

(ii) Constructions of ethnicity

Ethnic stereotyping was readily available. Its pervasive part in the discourse of the industry was indicated in many examples. For example, ethnic stereotyping is evident in assumptions about technological understanding and skills, small traditional Javanese and large modern European technology, danger to Europeans from Natives, Natives learning foreign revolutionary ideas from Europeans, Native agriculture being improvable by European instruction but needing subsequent oversight to avoid crippling from ignorance and the usual exploitative relationships with Native officials and the rich, and of using Indo-Europeans as strike-breakers.²⁹² There were no indications of an equal balance, or symmetry, in cultural and social relations. There were certainly no references to any comparable influences in the opposite direction with Europeans being impressed by, learning from, or endangering Natives. Unthinking

²⁹¹ (Hirsch to Ramaer 6/3/19). Of the 130/179 Syndicate members responding to an early 1919 survey about half only provided subsidised food, about a third were paying a cost of living increase and/or a wage increase, some of these also providing cheaper food (Hirsch to Ramaer 20/3/19).

²⁹² The respective references are Japan 1908; *Archief Bijblad* 1912: 841-849; *Archief Bijblad* 1910: 7.

interpretations of the everyday like these were probably more powerful indicators of the Europeans' ethnicities of colonialism than the more self-conscious debates about whether the "different levels of development between the races" were due more to culture or to nature.

In 1908 publicity had been given to a formal complaint from Japanese exporters about the quality of some of the Java sugar. The *Archief* published an explanation for this from an experienced Administrator who blamed it on the "Chinese and Javanese who carried out the cooking process here but have absolutely no understanding of their work" and on the "mishandling of the sugar after the centrifuges". He contrasted this situation with that in the "most up-to-date Egyptian factory where the cooking is under the supervision of European cooks and after the centrifuges a Frenchman is in charge". An assumption of bewildered awe among Javanese villagers of the grand achievements of modern technology had underlain the 1912 description of the new 1909 *Kaliredjo* factory, adding to their appreciation of its provision of paid cane-cutting opportunities, and its irrigation and transport benefiting their own agriculture. Representations of the increased unrest and danger in the fields called on definitions of "Natives" and "the Native Movement" threatening "Europeans". Agitators could easily be categorised into "Dutch" or "European", and their "Native disciples", with a one-way tutoring or mentoring relationship between them. A similar, but benevolent, ethnic relationship had been implicit in the report of a major trial of rice as a second crop. Among its conclusions were that this could be done successfully, when assisted by the plantation, and this would benefit the general population, but would be resisted in all possible ways by the village heads, rice owners and other people who provide seed rice to the small man in times of its scarcity to make "a sweet profit of a hundred per cent". This could easily be prevented, if the European management makes available trustworthy Native officials who are made fully conscious that they may not have dealing with any such practices themselves. Less educated Indo-Europeans ("Indos") were considered, or even used, as strike-breaking replacements for Natives as were Natives from ethnically different areas of Indonesia. However, the word was passed round the

Syndicate Department meetings to not trust Chinese or Indo-European strike breakers who were members of Douwes Dekker's radical Insulinde party.

Another indication of the ethnic element in colonial management assumptions was where parallels were seen, as in the Hawaiian sugar industry with its Japanese labour force. The Hawaii Sugar Planters Association responded to a Syndicate enquiry about how they had organised during the large strikes in 1909 then in 1920.

Apparently, it was considered that race-politics underlay the movement there in a similar way to that in Java. BENISO Chairman Ramaer commented that one could exchange "Japanese agitators, Buddhist priests and school teachers" with "Dutch and by them-trained Native agitators, hadjis and native educators".²⁹³

A basic element in the construction and maintenance of the European/Native dichotomy in the colonial sugar industry was the continuing need for management to operate in a colonial dual labour market of employees, with one part based in Europe and the other in Java. In proposing this form of dualism my use of "colonial dual labour market" is not the same as Boeke's "dualistic labor market". His model of "dualism" included only a colonised society, comprising two essentially separate economies, modern and traditional. Within this, he differentiated between "regular" and "casual" labourers; the first individually employed as full-time "proletarian wage earners", the second living mainly as peasants but with some income from occasional piece-work on plantations, usually indirectly employed in a group through a leader who also directly managed their work activities. Boeke described these latter as "dualistic laborers". My model includes both the colonised and the colonising societies of the colonial economic relationship.²⁹⁴

As long as it was assumed that a significant proportion of the "European" employees, commonly put at a half overall with more among the trained, had to be attracted from Europe and retained in Java, their wage rates and conditions had to be based on matching or bettering expectations in Europe. Although this was an

²⁹³ Ramaer to BENISO Management, 14/8/1920.

²⁹⁴ Eg. Boeke 1953: 139-42.

underlying assumption, it was sometimes discussed explicitly. As one example, a mid-1919 circular from the BENISO Chairman to Members referred to the need to pay higher wages and profit shares in the Indies, to compensate for the greater risks to health and life and the lesser comfort there. As another, in a late 1920 JSWB meeting a proposal was considered to standardise initial salaries for agricultural engineers at f.375 a month to avoid applicants bidding up. This proposal also recognised that the starting rate in tropical agriculture could not be set too low in the current market if the sugar industry was to get her desired workforce. Overall, extra benefits were embodied in the level of wages and further provisions, such as free housing and medical treatment, long European leave after six years, and more generous private pension schemes than those in the Netherlands.²⁹⁵ In contrast, only the prevailing Java market needed to be considered for those who could be employed locally. The attempt by the April Committee to establish a two-class scheme of wages was an attempt to have formally accepted that in economic terms there were two classes of "Europeans", with the second class being intermediate between the first class "Europeans", of full European skills, responsibilities and careers, and the Native classes. It appears to have been expected that this second class would have been mainly Indo-Europeans, and the Sugar Union firmly refused what was considered to be the first thin wedge between European-born employees in the European labour market and the great majority, who were Indo-European. There was no way that the Indo-Europeans and those representing them would have accepted any such differentiation after their apparent achievement of a relatively secure position in the European labour market in only the recent decades. The varied and changing relations of the Indo-Europeans to the even tinier European-born and the massive Native components of the population were always important elements in the politics of ethnicity in the Dutch Indies. The expansion of the government administration apparatus and private business from the

²⁹⁵ For the respective sources see Ramaer to BENISO Members 6/6/1919; minutes of 7/9/1920 JSWB meeting (in its archive or the copy enclosed in material sent by BENISO's Secretary to its Management Committee 10/12/1920); and Appendix 16.

late nineteenth century, intensifying with the government's Ethical Policy of development from the beginning of the twentieth, had provided for a general rise of Indo-Europeans into a relatively comfortable economic and social position from what had been for many one of relative poverty (that is, a living standard considered by Europeans to be appropriate only for Natives). The preference among the great majority of the European community for Indo-Europeans over Natives as employees had been based in a mixture of their superior Dutch-language and other schooled skills, racial discrimination and a belief in their generally relatively greater trustworthiness and diligence. This preference came with the associated far higher cost of their employment at "European" over "Native" assumed wage levels. Indo-Europeans in general continued to link themselves as far as possible to the "European" identification and assumptions. They were predominantly in, and aspired to, urban and clerical positions.²⁹⁶ Nevertheless the employment preference was always fragile and inevitably increasingly threatened by the increase in supply of competitively schooled Natives for the expanding public schooling system. The precariousness of their relative position was becoming increasingly apparent after the War with the strengthening of the Native Movement, and the increasing polarisation of political currents in the Indies included the hardening of their attempts at differentiation from the Natives. Whether they identified fully with the European-born or as a separate ethnic category with a special role in the future Indies varied among them and over time in changing situations but it was certainly not acceptable for them to be considered as part of the Native majority. After the general transformation of their position, roughly over the decades 1890-1920, the increasing development of the comparably-schooled Natives, so-called "Native intellectuals", on one side and the continuing importation of more highly trained Europeans on the other clearly threatened their relatively recently achieved security and confidence.²⁹⁷

²⁹⁶ Van der Veur 1955: 441.

²⁹⁷ Eg. Van der Veur 1955: 66-9, 89-90, 103, 178, 219-20, 268-75, 441. There has been growing attention in Dutch scholarship to the position of Indo-Europeans (or Eurasians) in Indies society and in their migration to the Netherlands from 1946 during and after Indonesia's

F. THE ADMINISTRATORS

At the head of the promotion ladder of middle management in the factories were the Administrators. They were the general managers of all activities in factory and field, with much higher salaries than their subordinates and with additional income largely dependent on their profit shares, that could be several times their salary, in occasional years reaching extraordinary amounts.²⁹⁸

From the mid-1880s until the 1942 Japanese Occupation, about nine hundred men reached this position. Obvious traditions of "Administrator families" had been continuing but clearly declining by the early decades of the twentieth century.²⁹⁹ These

achievement of independence. Most of this writing concentrates on urban life, on government employment and salary issues, on the various twentieth century political streams in their organising and on notable urban-based individuals. Indo-Europeans in rural settings, in particular on the sugar estates, have rarely been covered (with Willems et al 1997 an exception, mainly about some families in the nineteenth century). Essential primary sources from the colonial period are the party organs of Indo-European-based parties, especially *Onze Stem* (Our Voice, 1919-41) of the Indo-Europeesch Verbond (IEV), while Mansvelt 1932 and Petrus Blumberger 1939 are major, politically conservative, secondary sources and government reports on 'Pauperisme' in 1902 and on the desirability of land ownership by Indo-Europeans in 1931 provide official surveys on some elements of Indo-European lives. Post-independence Van der Veur's 1955 thesis is a seminal, concerned and sympathetic survey with his subsequent articles (1961/84, 1968a, 1968b, 1969) additional original contributions, Wertheim 1947 was an early exposition, Van der Marle 1951-2 collated and discussed the most detailed demographic information then available, while Willems 1991 and 1992, Willems et al 1997 and Nordholt 1997 are recent useful collections of materials and considerations about Indo-Europeans from a variety of authors and perspectives. The Daum and Zaalberg biographies by Termorhuizen 1988 and Bosma 1997 include much information about the last quarter of the nineteenth century and the first three decades of the twentieth with the latter work having the Indo-European "problem" and its various ideologies, organisations and individual leaders as an essential theme. The classic account of the evolution of a "mestizo" society from the early founding of Dutch rule in Java is Taylor 1983. Issues of Dutch language competence are covered in Groenboer 1993 and Maier 1993.

²⁹⁸ See Appendix 14 for a description of positions, and Appendix 16 for examples of salaries and profit shares.

²⁹⁹ The overall list was constructed from the series of surveys of all factories published by the Syndicate from 1895, earlier lists published in the Handbook of Dutch Indies Plantation and Trade Companies series [Handboek voor Cultuur- en Handelsondernemingen in Ned.-Indië, HCHO], "Personalia" and incidental information noted in the *Archief*, company and factory records and commemorative histories, BENISO annual reports and incidental sources. For a list of apparent "Administrator families" see Appendix 10.

had included members of owning families, proportionately more Chinese, managing their family factories - but the majority were from families who do not appear to have had ownership connections with the factories they managed. In the survey, nearly a quarter of the family names appeared at least twice, including thirty four at least three times, frequently accompanied by other evidence of likely connections. By the second decade of the twentieth century there were clearly fewer apparent family connections among European Administrators. Some of this drop was due to the initial owner-Administrator and his sons or other close relatives being succeeded by non-relatives or, perhaps, relatives in-law with different family names, some to factories being closed or sold. Chinese Administrator dynasties seem more long-lasting, in major part from their more common pattern of owning-administering families.

The great majority of Administrators were in that position in only one factory. After that they usually disappeared from the public record. Biographical information is available for only a small minority of them, very much biased towards those who had biographies written for the *Archief* or who continued to play a noticeable role in the sugar industry. Normally, this would involved being recorded as having become a Superintendent of factories "related" to a management company or a Director of a sugar factory-owning company or companies. Several Administrators retired and died shortly afterwards, with some travelling to the Netherlands sick and dying there. A few died "in office". However, a minority continued to participate in the management of the industry in supervisory positions, as Representatives of owning companies in Java or as Directors or Board Members of these companies there and in the Netherlands. Some Administrators found enough time to be on the Boards of local companies too.³⁰⁰

³⁰⁰ For a list of post-Administrator careers see Appendix 11.

G. DECISION-MAKING IN MANAGEMENT

The Administrators, as the general managers of the factories and associated plantations, were expected to exercise overall organisation and supervision of all activities "on the spot". This obligation was spelt out in contracts and is clear in the regular internal reports of normal operations with detailed identification and statistical reporting of activities in their fields and factories.³⁰¹ Other more unusual sources include the Colonial Bank Agent's reporting on the building of the new *Bandjaratma* factory from mid-1911 to its first milling in 1913. Every activity and item was carefully recorded, costed and reported in detail, in a sequence of statistical reports from the field and factory employees to the Administrator to the visiting Superintendent and Bank Head Agency staff to the head office in the Netherlands, although, as pointed out before, most technical decisions were being made on Java. The Administrator was involved in many diverse areas of management. Some of these are listed below.³⁰² These would have required continual discussion with his specialised European staff and with the visiting Superintendent.³⁰³

Industry management, most visibly the Administrators at estate level, managed changing technologies. The majority of changes in planting and processing technology were incremental but there were more radical changes, such as in field transport and electrification.³⁰⁴ By the beginning of the 1920s, the technologies of selecting, planting,

³⁰¹ Eg. see Appendix 16.

³⁰² The contracting of workers and suppliers for the laying of foundations; finding and costing water supplies suitable on health grounds for factory personnel rather than only for villagers (!); collecting and using river stones for initial surfacing of the access road to the national trunk road several kilometers away; details of acquisitions of materials; arrangements with supply agents about delivery and charging for machinery; installation of this equipment as it was supplied; employment of hundreds of Native workers, first for building, then for land preparation and planting amounts and specific areas to lease for the next two planting and growing seasons; choice of cane varieties; establishment of planting-right boundaries with an adjacent factory; negotiations with a private railway company and the government's local irrigation division about obtaining land concessions and the building of railway earthworks and tracks; and priorities in buildings.

³⁰³ ARA 2.20.04 Kol Bank. Inv Nr 989 "Rapporten van Bandjaratma aan het Hoofdagentschap Koloniale Bank".

³⁰⁴ For more information see Appendix 19.

growing and protecting, processing and transporting the crop had been changed in both nature and scale from those of the 1880s, and consequently managing them had changed.

Management of the factories now also involved the small number of Agents, Superintendents and various technical Advisers. Managements also used the expertise of the technical and selling Agents of the manufacturing companies, who provided information and advice about purchase and operation of "their" equipment, designed, and built new parts of existing or complete new factories on contract to the factories' owning companies. These included Halle, Stork, and Werkspoor which were based and manufactured in Europe, and Braat with its main operations in Surabaya.

The levels of management entailed detailed and dense flows of information. These moved between levels within individual factory-field combinations and directly between the Administrators of factories and the Directors of companies. There were also detailed direct communications between Administrators and the Agents and Advisers, and flows between Administrators and Directors, mediated, selected and commented on by the Agents.³⁰⁵ On closer examination these communications show how much of the active management was being done in Java and reported to the Netherlands. For example, during the 1911-13 construction of the Colonial Bank's *Bandjaratma*, it is noticeable from the letters sent to the Amsterdam Head Office from the Surabaya Head Agency that most of the technical decisions were being made in Java in discussion between the Administrator and the Agency, sometimes with advice from other local expert sources. Only in a couple of cases was technical information sought in Europe via the Head Office. On another occasion Head Office was told that a European search for the latest drinking water filtration measures was already being carried out by a Surabaya staff member currently visiting the Netherlands "on leave". Moreover, the letters' requests for approval of financial decisions on operational, including staffing, matters were politely phrased as requests but were effectively

³⁰⁵ Eg. See the various series of regular Advisers' and Administrators' reports for *Bandjaratma*, *Kanigoro*, *Gending* and *Maron* in the Colonial Bank archives.

notifications assuming agreement. An obvious example of this assumption of agreement was the Surabaya Head Agency writing to the Head Office about the intention to build a new branch hospital at the factory, enclosing the ground plan and the Administrator's covering letter, an initial estimate of costs, the information that the Administrator had been empowered by the Agency to start building as soon as possible. It concluded: "it was trusted you will give agreement to the supplementary estimates which would be soon be sent" . These notices were sent two weeks later, on the same day as another letter notifying the Head Office that building had been started.³⁰⁶

Most technical expertise was in Java, as was most decision-making. In the terms used by Gales and Sluyterman (1998: 293) most factories were clearly being managed by "free-standing" rather than "multinational" companies. For example, in 1910 the HVA had one Chief of Installations (Machinery) and one of Fabrications based in its main, Surabaya office; by 1915 it had added an Adjunct Chief of Installations; in 1916 another for Fabrication; by the early 1920s all were "Chiefs", but there were no comparable positions in the Netherlands. Colonial Bank archives contain the detailed reports to its Surabaya office from Advisers' visits to factories, but no similar advice from Amsterdam. The Eschauzier concern ran its own research centre with Advisers for its tight cluster of factories around Modjokerto. It was situated in the middle of that cluster where the Delegates of the company made decisions, not in Den Haag with the Director and Board of the company. Fraser, Eaton & Company's laboratories and technical services were in Java, as was the Klaten Plantation Company's research centre. The management companies, such as Kooy, Tiedeman & Van Kerchem, Anemaet and Mirandolle Voûte, had their staff in their Java city offices. The NILM and NHM did not provide technical advice from the Netherlands. Internatio

³⁰⁶ Sources are in ARA 2.20.05 Koloniale Bank InvNr 1001. Inkomende Mail. Suikerfabriek "Bandjaratma". 1917-1922. The letter referring to the hospital "request" was CKZ 14386, 15/4/1920.

had a technical Adviser in its Surabaya office. The Administrators and trained employees were in the factories in Java.

Overall, major financial decisions were made by Directors, on the basis of the expertise and opinions in Java. A minority of Directors lived in Java, others occasionally visited or were occasionally visited in the Netherlands by Administrators on leave. Many were themselves retired Administrators, and detailed information was passed on to them. Nevertheless, most of the activity of management was carried out by those they employed full-time in Java for this purpose. Moreover, apart from the small number of staff with high levels of scientific expertise in the Research Stations, most technical expertise in Java was in the factories, as was most decision-making. The Agency, Head Agency, or Representative's management office in the Java cities might provide a base for company technical Advisers, usually three in the conventional categories Agricultural, Technical and Chemical, but they were mostly staffed with accounting and clerical employees. Administrators had to obtain financial approvals and company policy interpretations from these offices, which carefully examined the stream of reports and proposals sent from the Administrators for their financial implications.

H. MANAGEMENT, PROFESSIONALISM AND TECHNOLOGY

(i) Encouragement of new technology

Collective management had actively supported the latest technology and careful cost-effectiveness studies of its application. A stream of new processes and technical inventions produced in the Research Station and in the factories was reported in detail through the *Archief*, with apparently a pragmatic responsiveness to developments reported and offered from elsewhere. Noticeably, these came only from Western sources. Nothing useful was ever reported from Native knowledge or practices. Much

of the repeated trialling of field working, ploughing and channel-cutting by machinery was supported by the Syndicate on behalf of its members. Large payments were granted to import and trial tractors and a variety of ground-working equipment.³⁰⁷ Approval was also given for large Syndicate subsidies to bring newly designed mills and crushed-cane-residue (*ampas*) briquette-making machinery from Europe to be installed at factories for testing, but the war hindered or prevented much of this. Management in Java could now be more directly involved in purchasing and supply, as increasing amounts of the machinery was being built in new import-substitution machine factories in Java, mostly in Surabaya.

(ii) Management, diffusion and discovery of knowledge about new technology

As described in the previous chapter, major elements in collective managements' support of technological development were its funding of research and development by the Research Station and the diffusion of reliable information through the *Archief*. At the beginning of the 1920s, both were brought under more centralised control, and the priorities of the latter modified, but for different reasons than those causing other changes in the industry's collective management. The editorial control of the *Archief* was gradually taken over by the Research Station for practical reasons, while changes in organisation of the Station reflected its primary purpose was to assist in solving practical problems as decided by its funders. The editorial committee, which included Administrators, had increasingly operated by correspondence. In 1915 a new editorial system with a reduced role for the now almost completely "external" Editorial Committee was introduced. In 1922 the Research Station formally took over the role of editor, and the editorial committee was divided into Agricultural, Technical, Chemical, and Economic sections, each of three members mainly from the Station. Originally, some concerns had been expressed that the *Archief* was too closely under

³⁰⁷ See Appendix 19.

the control of the scientists at the Stations but this had apparently dissipated over the years. Management representatives of the industry had supervised the Research Station through its management committee which approved the regular work programs its Agricultural, Technical and Chemical Divisions had to provide each year.³⁰⁸ In response to middle managements' priorities the Stations' expert support was extended in both its general applied research activities and its individual and local advisory services. The former were gradually centralised at the increasingly extensive facilities at Pasuruan on East Java and Semarang in Central Java. A plan to build new Technical and Chemical Divisions in Surabaya, capital of East Java, with new Syndicate offices included, had been aborted, apparently because of regional Syndicate relations combined with cheaper land at Semarang. More localisation of advice was provided through the Extension Service. This had expanded from the four existing branches in 1913, to fifteen centres each with minor facilities and supervised by a Group Adviser serving a group of factories. The centres forwarded requests for research on local needs to Pasuruan while providing advice directly from their Advisers and indirectly from Pasuruan.³⁰⁹ A couple of intermediate "inspectors" were employed to improve communication and coordination between these extension centres, and between the centres and the main Pasuruan research centre.

On the whole, managements generally approved and appreciated what was provided by the collective research services they funded, although the Agricultural Division was appreciated more than the Technical and Chemical Divisions. The Agricultural Division's studies of plant development and infestations were well

³⁰⁸ For an account of the publication's pre-War period see the long-time editor W Dickhoff's, "Geschiedenis van het Archief voor de Suikerindustrie in Ned.-Indië", *Archief Jubilenummer*, Mei 1918: 3-12. For an example of the Stations' work-programme see *Archief* 1915: 587, 236-244. Jochems' 1924 article (*De Indische Post* 1924) describes the Station's activities after all three Divisions had been consolidated on the Pasuruan site, with about 30 European and 120 Native employees, and Horst (1932/3) proudly reports some of its contributions in the early 1930s. Its scientific and publishing language remained Dutch until the hand-over to the Indonesian government in 1957 (Handover 1957).

³⁰⁹ The Annual Reports of the original four show their activities. The centre at Cirebon, founded in 1910, had been continued as the "Cirebon Research Station" with some independence from the Extension Service after the latter's 1913 establishment.

understood and used by management. One of the crucial pursuits of cane breeding trials continued to be resistance to sereh, although privately developed cane varieties were increasingly preferred until well into the 1920s.³¹⁰ The HVA had been clearly disaffected with the Technical and Chemical Divisions for some years from the mid-1910s, in spite of acknowledging that their work and reports were useful to the smaller companies which did not carry out their own research. There were claims that after Director Prinsen Geerligs' useful early work on white sugar fabrication the work of these Divisions were no longer cost-effective. An important part of what the Technical Division did was analyse data on the operating of their milling machinery supplied from all factories. This system of Joint Milling Control had been gradually developed, including a large change after a strong attack on the current system at the 1911 Sugar Congress. It required increasingly more detailed and accurate measurements and reporting, which some factories and companies were not convinced was worthwhile or cost-effective basis for them individually although perhaps was useful on an industry-wide basis. There had also been long-standing debates about setting up a complete test factory. These had begun in the mid-nineteenthcentur and were intensified with another proposal to the Syndicate from Van Musschenbroek and Prinsen Geerligs towards the end of the century, and a further proposal in 1911. The last had been dropped, after a combined meeting in Solo of the Syndicate and Research Station committees when "two of the large organisations" did not support it. There were also private criticisms of lack of organisation and poor facilities in the Technical and Chemical Divisions after their initial move to Semarang, as well attacks on personal inadequacies in the staff. These complaints were particularly voiced by the management of some of the large and thus large-paying companies, which considered

³¹⁰ Eg. HVA [Surabaya] to BENISO, 21/4/20, with its inclusion of its earlier letter to the Research Station 2/5/16; Extract from the letter of Van Vloten (*Sempalwadak*) to Ramaer 25/3/1920). EK 28 and DI 52 together were about 10% of plantings in 1917, about 20% in 1918, nearly doubled in the plantings for 1919 and about three quarters of all 1925 and 1926 plantings. The first popular Station variety, POJ 100, had dropped from about a third of all planting at the beginning of the teens (behind the majority 247B) to only a tenth by 1921 and the next, the "wonder variety" POJ 2878 was still years ahead (Konigsberger 1932/3).

that these Divisions had not been adding usefully enough to what they could find through their own research. Their own increasingly qualified operating and advisory staff carried out internal monitoring and testing across their own factories. In 1920, in spite of submissions to the contrary by the Technical Division Director (Ir. Blok), the proposal of the Agricultural Division Director (Dr. Ph. Van Harreveld) was accepted.³¹¹ He was promoted to the new position of General Director of the Station. His Division was established as the pre-eminent one, with a corresponding reduction in roles and scale of the other two. At this time Van Harreveld's status, personal qualities and conservative political preferences had been additionally indicated by his being asked at the same time to replace a repatriating PEB representative in the People's Council. This would make him a second "sugar" representative with the appointed member Syndicate Chairman Hirsch. However, his position as an employee was shown by his requiring the permission of the Research Station management committee, which employed him. The committee of major company representatives was split. Although the balance was in his favour, Van Harreveld decided to not take up the offer, in part because he was now the Station's General Director. One factor in the decision to reorganise the Station was that major companies' resistance to paying for the continued work of the Research Station in general would have intensified unless the Station refocussed on agricultural research. Both the other Directors resigned. Ir. Blok became the Technical Adviser of the Eschauzier Concern's factories. Ir. Langguth Steuerwald (Chief of the Chemical Division) was appointed as Internatio's adviser for its related sugar factories then, after seven years, moved to become Superintendent of the Mangkunagara Properties Foundation (including over its two sugar factories, *Tasik-Madoe* and *Tjolo-Madoe*).

All the staff positions, and all the discussion and decision-making about the *Archief* and the Research Station, were in the hands of Europeans, with all higher levels of their training in Europe. No interest was reported in changing this.

³¹¹ See BENISO Secretary Van Hasselt circulars to the committee 8/10/20; 16/10/20; 10/11/20; 3/12/20.

(iii) Management representation in professional training

A major feature of technology transfer is recruitment of trained employees and linking further training to promotion. As mentioned previously, by the 1900s a general promotion pattern had been established. Trained European management employees who were new to the sugar industry started in the bottom ranks, usually in Second Mechanic or Assistant/Second Chemist positions. They then moved up through these to First Mechanic or Fabrication Chief (chief chemist). Further promotion required a move into the fields as a low level supervisor, or as a Field or Test Chemist, then through more senior field positions up to First Employee, the second in charge and management deputy to the Administrator.³¹² Promotion could be within the same factory-plantation combination or by transfers, more likely between those owned or managed by the same company. Management employees with little or no previous training were more likely to have started in the lowest field positions, or as warehouse, store or weighbridge supervisors. Many of these would also be promoted, although some would not move up far. There were some variations in number and title of the ranks, particularly in the larger factories, but the general pattern was firm. Men were not appointed to be Administrators until they had "come up through the ranks".

This system applied only to Europeans. Native workers, over ninety per cent of the people permanently employed with twice as many again employed seasonally or casually for varying periods during the year, were not included in this system. Many of the permanent Native employees worked at the same factory for decades. Their recruitment and promotion into the more skilled artisan (*ukang*) and foreman (*mandur*) positions was more informal, arranged at least partly among themselves then legitimated by European management, and involved more complicated relationships than promotion among the Europeans.

³¹² See Appendix 14 for descriptions of these positions.

Upper management of the industry did not directly provide training for its European middle management employees. However, it did have influence, partly by small subsidies of courses it approved and supervised, but mainly from its willingness to employ graduates of these courses. If its inspecting representatives suggested changes they were quickly acted on. A diploma was portrayed as a great advantage for initial employment but was not a guarantee of further rapid promotion, which would be subject to demonstrated performance. Promotion was, of course, more likely with the skills and understanding gained during diploma training.

By the end of the First World War there was an increase in the number and range of training institutions in the Netherlands. They were described in management-approved guides as suitable for those wishing to enter the Java sugar industry and were also those named among the diplomas listed in the 1923 JSWB survey of employee qualifications (see next chapter). All charged fees, and incurred boarding expenses for those without homes nearby. As most Dutch children had only elementary schooling, in 1930 only seven per cent of 12-17 year-olds were in school, these courses were been available to only a small number.

Training in Dutch State institutions was in either technical or agricultural courses. The Higher Technical School in Delft had continued its five-year courses, after five years of secondary schooling, and added some supplementary teaching about the Java sugar industry. The Higher Agricultural School in Wageningen added a full Tropical Agriculture course in 1909, including voluntary Malay and Javanese. Later, over 1917-1919 it extended its courses into five year Agricultural Engineer diplomas thereby bringing them into line with Delft's.³

By the end of the First World War there were three State training schools at the upper secondary level which were particularly related to the Java sugar industry. The institution founded in 1878 as the Amsterdam Training School for Mechanics had continued to provide employees for the industry while being developed into one of the

³ For the 1909 change see Tichler 1909.

first Secondary Technical Schools in the Netherlands. The graduates from its four-year post-junior secondary school Sugar Technician courses, which involved working in a beet sugar factory and in a factory manufacturing machinery for sugar factories, were trained to eventually cooperate directly with the chief engineers in a large factory or be a chiefs themselves in small or middle-sized ones. However, many were promoted further. In 1913, another Secondary Technical School providing a similar course was opened at Dordrecht with an annual subsidy from the Java industry through the Syndicate. Its final examinations were reviewed by a committee of School staff and non-staff experts who recommended award of the diplomas to the School management. The diploma also qualified students for entry to Delft. The Syndicate, later BENISO, was involved in this more powerfully at Dordrecht which relied more heavily on voluntary contributions and was accordingly more dependent on favourable reports to gain continuation of the industry's subsidy was. These reports give some insights to the assumptions and expectations of the upper management of the industry.³¹⁴

Until about 1916, upper management had not been involved or apparently much interested in agricultural training in the Netherlands but this position changed. In the early years of the century some training in tropical agriculture had been provided at the Wageningen Secondary Agricultural School. In 1904 this had become independent, providing a three year course and a one year additional course in Colonial Agriculture (the "Indian class"). However, it disappeared from the sugar records after a few years. By 1916 management's focus of interest was the one year Colonial Sugar Course, newly available after the basic three year diploma at the Deventer Secondary Colonial Agricultural School. This School had been opened for those who wanted to work in agriculture in the tropics, especially in the Dutch colonies. Its main course was general, not aimed at any particular crop. The course included some Malay and Javanese, later adding Sundanese, the main language of West Java, as an option to Javanese. The

³¹⁴ See Appendix 20 for two examples.

setting up, and continued running, of the Sugar Course was subsidised by the Java industry through grants from the Syndicate, subject to favourable reports from its annual inspection of the School and its graduating students. The subsidy started at f.4000 followed by f.3500 a year for the first three years. By 1927, this had risen to f.6000, with an additional f.600 for the School's "Sugar Museum"³¹⁵. Deventer's Sugar Course was started on a more restricted basis than originally planned because the Dutch Government did not contribute half the costs as had been expected. The Syndicate and BENISO support was based on recognised limitations in the current practice of appointing field personnel from the factory personnel. These were inexperienced and initially could not work independently because they lacked biological and agricultural training. Upper management's continuing appreciation of the Course was demonstrated, not only by the continuing subsidy, but by the membership of its advisory and support group, the "Society for the Colonial Sugar Course at the Secondary Colonial Agricultural School". This was administered by Ramaer and chaired by Prinsen Geerligts, with Delfos from the Principalities Plantation Company among its members, donations of samples from the Colonial Bank and of a complete series of the *Archief* by the heirs of Van Musschenbroek with missing issues provided from the Syndicate. The granting of its diploma was decided by a committee including two members from BENISO, which considered both the results of the final examination and the opinions of a meeting of staff about the determination and knowledge of each student. There were, at least initially, concerns that the courses of this School would not attract enough students to survive and a publicity campaign was proposed. However, it did settle down with small numbers and about twenty men graduated in its first four years.

The private Amsterdam School for the Sugar Industry continued to be a major source of employees with some preservice training and beet sugar factory experience,

³¹⁵ Syndicate annual reports 1916-1927.

mainly as chemists.³¹⁶ There appears to have been management recognition of the value of these courses, but usually no direct involvement or support. Only one report was noticed of a representative at the examinations.

To some extent, all managements were kept informed about potential recently trained employees as they became available. The names and grades of the successful graduates from the three State secondary level institutions and the Amsterdam Sugar School were published in the *Archief* each year.

In Java collective management took a major part in the professionalisation of its European employees by setting up its own sugar chemist qualification. However, as in the Netherlands, it did not provide training courses itself. From early in the century management had recognised but not participated in a short training for the industry provided by two small private sugar schools in Surabaya. The results were published in the *Archief*. For example, ten named students were awarded a diploma for the 1905-6 courses, and an unknown number of others were given a certificate of attendance. Obviously, at this time, these were used as inservice courses by some employees as, among the successful ten, were two First Employees, two First Chemists, three Chemists and a volunteer working in the School's laboratory. Judging from comparing names with my Administrators list, at least three later became Administrators. Employee enrolment in these first two Schools, each of which provided two successive four-month courses in Surabaya during the quiet season between campaigns, had been approved by some employers and there had been some subsidies provided to employees while they stayed in Surabaya.³¹⁷ However, at least by the mid-1910s, these Schools were considered increasingly. From 1917 a third, much larger, Sugar School was started by the Sugar Union and the earlier two soon closed. Similar to its relations

³¹⁶ A much smaller contribution from before 1911 to about 1917 came from shorter courses for very small groups run by an ex-Fabrication Chief, N.C. Hoogvliet. These involved the usual teaching, laboratory, excursion and campaign experiences, lasted from seven months for students with prior complete upper secondary schooling or up to a year for those with only lower, and was aimed at preparation for the specific requirements of chemist's work in the Java industry, including the Syndicate's Examination in Surabaya.

³¹⁷ See *Archief Bijblad* 1908: 71; *Archief Bijblad* 1906: 388.

with schools in the Netherlands, the Syndicate gave this Union Sugar School an annual subsidy, initially of f.3000, and placed a representative on the supervisory committee in return. Starting from a total of about fifty, its enrolments doubled over the next decade. The subsidy also rose, reaching f.10,000 by 1927³¹⁸

Collective management's major involvement in training continued to be through its control over the *Syndicate diploma as a sugar chemist in the Java sugar industry*. The closely specified and supervised annual examination for this, the "Syndicate Examination", had been first held before the campaign in 1908.¹⁹ There were no previous training requirements. Prerequisites included participation in at least one campaign, at first anywhere but from 1917 in Java, and payment of the, eventually high, fee. At the first examination twenty seven of the eighty eight candidates were successful in gaining a diploma. Thereafter, similarly normally only a minority, almost but not quite all "European", passed each year.³²⁰ Each year, the proceedings and results of the examination were fully reported, and its public accreditation by the Syndicate ensured its unchallengeable status as the highest such qualification available in Java, well above the A and B diplomas each of the Schools awarded for their two sequential courses. As soon as the Syndicate Diploma was available, the existing

³¹⁸ Syndicate report 1927: 17. For some celebratory further information about the School see Brouwer G P, "De Bondssuikerschool", *Gedenksnummer van den Suikerbond 1907-1927* 1927: 34-8; Vereeniging 'Oost en West' (1929).

³¹⁹ "Reglement voor het examen ter verkrijging van een diploma voor chemist bij de suikerindustrie op Java", and "Programma ter verkrijging van een diploma voor chemist bij de suikerindustrie op Java, af te nemen van wege het Algemeen Syndicaat van Suikerfabrikanten op Java", *Archief Bijblad* 1907: 906-7; "Het uitschrijven van een examen van Syndicaatswege ter erlanging van diplomas als chemist bij de Suikercultuur", *Archief Bijblad* 1908: 56-7). A supervising committee was empowered for this each year by the Executive Committee of the Syndicate (eg. see minutes of its meeting 3/1/19, in BENISO archive).

³²⁰ In 1908 two of the twenty seven had Chinese names, and at least two others appeared among the names of Administrators several years later. In 1909 sixteen of sixty seven passed, all European, including seven who later became Administrators seven to twenty years later, and one who was already an Administrator. In 1912 twenty of forty, all European, succeeded in passing the nearly two weeks of examinations. In 1914 twelve of twenty five, all European, passed. In 1915, only five of sixteen passed. In 1916, fourteen of thirty five passed, including one subsequent Administrator, one Chinese - and one Mas Soepardi, with an Indonesian name. In 1921, fifteen passed, including two Chinese-named." (Het examen voor suikerchemist", *Archief Bijblad* 1908: 336; *Archief Bijblad* 1909: 319; *Archief* 1912: 1183; *Archief* 1914: 1723-5; *Archief* 1915: 1961-4; *Archief* 1916: 1477; *Archief* 1921: 691-4.)

private Sugar Schools had aimed their two-course sequences towards it, and the subsequent Union Sugar School was set up to prepare for it. There were continual minor modifications in the regulations and in the program covered in the examination, as well as in the increasing range and detail specified for the content. Each year, the notifications of the time in April, place and prerequisites of the examination, the names and grades of those successful, and the questions and examiners' general comments on their answering would be published in the *Archief* and, to a lesser extent, in *De Suikerbond*.

Given its prerequisite of at least one campaign experience, the Diploma should be seen as largely an in-service, but basic, qualification. Until 1917, because the secondary courses in the Netherlands all included a campaign component their graduates would already have that prerequisite. Thereafter, all those in the Union school preparing for the Syndicate diploma would have needed to have worked through at least one Java campaign, whether already Netherlands-trained or not. Graduates from Wageningen or Delft, who did not have this experience in their courses, would have needed the campaign. There were occasional European "volunteers" in the factories during the campaigns, possibly gaining that required experience before enrolling in a course and being employed. There were no further qualifications provided by this time, and no sign of management concern at the lack.

More training was now made available in Java. By this time, the state pre-service mechanic training at the Surabaya City Evening School and the Trade School (*Ambachtschool*) in Surabaya, the Trade School at Semarang, and the technical training at the Queen Wilhemina School in Jakarta had been supplemented by the government. There were trade schools at Surabaya and Semarang, later also at Yogyakarta and Bandung. These did not train to the same level as the Secondary Technical Schools in the Netherlands which produced technicians. The Java training was only for tradesmen. At this time no further technical training was available locally, but moves towards setting up the privately funded Bandung Technical Institute to provide engineering courses, comparable to but cheaper to Delft, were well subsidised

by sugar managements. For example, in 1917 the companies owned or directed by the Colonial Bank, on the suggestion of their Directors, had each agreed to donate f.10,000 towards the establishment of what was then to be called the Royal Institute for Higher Technical Education in Netherlands Indies.³²¹

Factory managements increasingly supported their current employees to attend the sugar chemist courses, but apparently not courses designed for other occupations. Employers granted some limited leave for attendance. In 1919 the NHM circularised its administrators to allow leave without pay for employees, with reimbursement of this and any bonuses if a diploma was achieved. The Union considered this meanness because board and lodging had to be paid monthly during the course so married or young employees with no capital would find it practically impossible to attend. The Union also pointed out that this new NHM policy was after two Union members had lost their jobs by requesting permission to attend.³²² Initially, the Union had intended to broaden the School's offerings with divisions for field employees, mechanics, railway personnel and book-keepers as well as for chemists. A start was made with a Course C, in Agriculture, in 1918 and 1919, also subsidised by the Syndicate at f.5000 a year. However, there was insufficient demand for this, and most factories deemed it too difficult to provide the long leave necessary for attendance, so these plans were given up.

Moreover, managements' increasing demands and encouragement of training were not matched by major financial contributions to it. Although by 1917 the Syndicate was subsidising the Union School, and later the Semarang trade school, in Java and the Deventer and Dordrecht schools in the Netherlands, these subsidies were not large.³²³

³²¹ Eg. *Kanigoro* Board meeting minutes 7/6/1917.

³²² *De Suikerbond* 1919: 997.

³²³ Eg. In 1920 f.3000 for the chemist courses and an extra f.5000 for the short-lived Course C in Agriculture (see S JHirsch to the "Voorzitter van den Bond van Geëmployeerden by de Suikerindustrie op Java en Madoera", 23/8/1919 Nr 3983, in the BENISO archive); f.3000 increasing to f.5000 in 1920 for the Deventer course (see telegram Ramaer to Hirsch 29/3/19, in BENISO archive). f.1000 was given to the Semarang school in 1919 and 1920.

Interestingly, there appears to have been little management consideration of the potential industrial-political role of these training institutions, presumably an indication of the apparently non-challenging ideologies among those graduating. Nevertheless, during the major industrial conflict of 1920 a suggestion was put to a Syndicate Management Committee meeting that aid be given to an organization of students of Dutch secondary technical schools from which a majority of personnel sent out to Java were recruited. The purpose of this organization would be, inter alia, to produce "a periodical which provided systematic propaganda of healthy ideas about personnel relations in the industry". However, the meeting decided that this proposal needed further working out before a decision could be made, and it was apparently dropped. From the "other side" the Sugar Union provided a representative on request to describe "the life of a plantation assistant" to students at the Deventer Sugar Course and to give an employee-perspective to what the students were taught about the practices of the industry. Other connections between training and industrial relations were passing and indirect. The Syndicate's granting of a subsidy to the Union's Sugar School in Surabaya was accompanied with complaints about the publishing of antagonistic comments by Union members in the Union paper.³²⁴

One effective utilisation of existing Syndicate resources of expertise and facilities for inservice training had been the provision of short "courses for cane planters" at the Pasuruan Research Station. These had been initiated in 1913 by the Director, Dr. Van Harreveld, in part for the benefit of those European field employees from estates who were temporarily attached to the Station during the "quiet times", as was normal then. A seven-day program of lectures and demonstrations had been provisionally put together and advertised through the Syndicate, with a maximum of twenty participants. This proved unexpectedly popular, the course filled within a week. A second then a third, eventually six courses, were put on from December 1913 until April 1914, each for about two dozen employees. The program was extended

³²⁴ The respective sources for these three cases are the minutes of the Syndicate committee 25/6/1920; De Ruyter 1921: 51-4; Syndicate Report 1919-20: 14-5.

considerably after the first. In 1916, 1917 and 1918 a longer program of about double the material was presented to about a hundred participants in each course. The Station also ran shorter meetings over one to three days on specific topics, but again infrequently, organising only five over the nine years 1915-1924.

In general, management had not actively supported the expanding training opportunities for potential Native employees. Only Java courses were relevant as travelling to the Netherlands and living there to study at Dutch technical schools or other sugar courses, as was done by some Europeans and Indo-Europeans, was out of the question for the Native families who might have considered technical trade rather than legal or medical education for their sons. Moreover, Native access to relevant local courses was restricted. The Sugar Schools in Surabaya were made available only to Europeans by requiring prior employment experience which only they could have had, and by costing far above what most Natives could pay. The tiny system of Dutch-language trade schools being slowly built up across Java had their three-year courses linked to the European lower schools, so had not been available to almost all of those Natives who filled the artisan positions in the sugar industry. For the same reasons the other secondary schools providing technical training were also unavailable. This was even more so as studying at them would require boarding in the cities. There was some very limited voluntary assistance provided for studying away from home, as indicated in the appeal for donations to the Jan Pietersz Coen Foundation for residential (*tehuis*) support for Natives and others studying away from home in the Indies.³²⁵

There does not appear to have been any, or any significant, representation of industry management in any of the institutions for training Natives as there was in those for training Europeans in Java and in the Netherlands. Upper management levels of the sugar industry were sceptical of such government-provided training and preferred employees to receive training which was both more focussed and more general, believing that would be more relevant to the immediate requirements of the

³²⁵ See copied letter of appeal from Eschauzier/Ramaer, with further support from Ramaer 23/4/1920 in the BENISO archive.

practices in the industry. This scepticism was apparent from the start of this system. Management also expressed doubts about the Government's competence and understanding of what was required and what was possible and suggested that the development was related more to the ideals of the Ethical Movement than to the needs of industry.³²⁶ Most recruitment and training of Native employees at that time, whether for the office or the laboratory, as artisans or as foremen, was carried out "in-house" with very few exceptions. Nevertheless, the ready use of skilled workers from urban industry as replacements for striking factory artisans in the 1919-1920 unrest indicates that management was open to change. Any prerequisite education appear to have been limited to general literacy rather than specialised skill training.

I. SUMMARY: REPRESENTING MANAGEMENT AGAINST CHALLENGE

All through these tumultuous times Mr. S.J. Hirsch had been the Chairman of the Syndicate, and the expansion of his duties reflects the expansion of the functions of the industry's central collective management. When he had taken the position in 1917 it had been in a far quieter and simpler political environment than by the time he retired in 1920, aged 64.³²⁷ His management role had been expanded to include Chairman of the Syndicate's Management Committee and its Advisory Council, the Research Station's Management Committee and its Supervisory Committee, the Management College of the Java Sugar Employers Union (JSWB), the Management of the Pension-funds for Employees of N-I Sugar Estates, and the Accident Funds. The Syndicate also put out the *Archief* and ran a Fingerprinting Bureau and an Intelligence Service, the latter under the Chairman's personal leadership. In addition, as Chairman Hirsch had been appointed to the People's Council as a representative of sugar interests.

³²⁶ Eg. expressed in Dickhoff 1910b.

³²⁷ His considered value to the industry's managements is indicated in his annual pension of f.10,000, his status as an employee by this pension being granted him only in the September of his final year. See confidential private letter from Hirsch to Ramaer 6/4/1920.

Nevertheless, he recognised his subordinate position relative to BENISO in the Netherlands and, particularly before the establishment of the JSWB, that the authority of middle management in Java was delegated and based on approval from upper management. Similarly, the other major collective sugar organisation, the sugar producers' relatively recent selling cartel, had been deliberately established legally in the Netherlands although it operated in Java.

Indicating the importance the industry's managements placed on the position, Ramaer's very highly paid replacement was the retiring Director of Finances in the Indies Government, Mr. Dr. Talma. Enquiries had been made in both the Netherlands and the Indies for suitable successors. Several high level possibilities, including Mr. Smissaert, ex-Secretary of the Dutch Employers Association and Mr. Rübenkoning, Chairman of the Principalities Agricultural Association, had been investigated and approached. However, they had turned down the offer or asked for more remuneration than they were deemed to be worth. After several potential candidates who wanted from f.2000 to f.4000 a month were considered, the Syndicate were pleased to negotiate with, then to overwhelmingly select, Talma. It was agreed that he would be paid f.5000 a month for five years with an initial capital payment of f.80,000, negotiated down from the initial request for f.100,000, but no pension, car or leave.³²⁸

Talma's succession was only part of a major changing of the guard among the most senior Java management of the industry around this time. The top level of management in Java would be mainly in new hands from the beginning of the 1920s. In addition there was a new Governor-General, welcomed by management as expected to be more sympathetic towards its interests.³²⁹ The relatively liberal Governor-General

³²⁸ See BENISO Secretary Van Hasselt to its Management Committee 6/8/1920; ditto 6/9/1920, including telegram from Syndicate Chairman Hirsch to BENISO Chairman Ramaer; handwritten notes on BENISO archive copy of agenda for 17/9/1920 BENISO Management meeting sent by Van Hasselt 11/9/1920; Van Hasselt to Management Committee 1/10/1920.

³²⁹ Eg. see de Klerck 1938: 538-545 for opinions about the Governor-Generals, the government and the People's Council, but also Krom 1938-9 for a critical view of de Klerck's interpretations. Locher-Scholten 1981 is the basic account of the 1916-1921 Governor-Generalship of Van Limburg Stirnum. He had been complained of by the sugar and other

J.P. Count Van Limburg Stirnum (1916-1921) was about to be replaced by the more conservative Dirk Fock (1921-1926, previously Minister of Colonies 1905-1908). At the end of December 1920, before Fock set out for the Indies, an audience was arranged with him for Talma, similarly about to leave to take up his new Syndicate/JSWB roles, and Van Hasselt, who had returned the year before to be the first Secretary of BENISO, and was about to succeed Ramaer as its second Chairman.

A shift in collective representation from middle to upper management had moved influence up out of the factories. The major companies had become more prominent and powerful in collective representation and in the operations of other owning companies they financed and managed. However, although having clear similarities in function, these major companies differed in their activities of ownership, management and expansion.

Professionalisation of lower and middle management had produced clearer career patterns that were related to but not dependent on training, and allowed a small but influential minority to progress into upper management. Related to this professionalisation, representatives of upper management encouraged and influenced but did not provide formal training for lower and middle management, while their support in the research and diffusion of new technology was maintained and increasingly centralised. As part of professionalisation, the recruitment processes of the industry's colonial dual labour market began to emphasise the evolving politics of ethnicity in the racialised segmentation of the system of colonial society.

Although collective organisations were intended to give the industry national and international prominence, and although major financial decisions had to be agreed to by company Directors, most management decisions were made in or just above the

industries as an "implacable enemy ... with their feeling threatened by his proposals for more autonomy for the Indies, proposals for taxes and possible restrictions of sugar planting areas and his personal antipathy. But (Locher-Scholten asserts) thanks to government intervention in 1918 the sugar price was restored, then planting restrictions did not go through, the government protected the sugar industry from a general strike. The whole export industry had profited from the regulation of shipping transport in 1918 and 1919" (106-7). He believed that a moderate response to the increasingly radical Native Movement would "take the wind from its sails", and a tolerant approach would be more effective in the longer run than repression (63-4, 80).

factories by their Administrators and other middle management personnel, just as they always had.

Chapter 4 MANAGEMENT AND THE CRISES OF REGULATION 1931-36

A. INTRODUCTION

This chapter analyses four main features of management change between 1931 and 1936. First it argues that the major changes in management during the 1930s were from extrinsic causes. That is, changes were precipitated by international and governmental factors, rather than the earlier local internal and external political challenges, now largely absorbed or suppressed. Secondly, I argue that these changes were rearrangements in the decreasing space allowed to management as the government made decisions and regulations in the wider interests of the colony. Previously, forms and limits to expansion set by the government had created a balanced symbiosis of development by management and state, but this equilibrium was now lost to forms of restriction and consolidation in a symbiosis of survival. Thirdly, it is argued that, during this late stage of this colonial industry, simple models of "professional" versus "family management" do not adequately account, either for the differences between companies or for the continuations of family involvements within the consolidation of upper management. Finally, the chapter analyses the ways in which recruitment and training of the industry's management personnel continued to be involved in the economics and politics of colonial ethnic segmentation.

B. CONTINUING RISE ...

Managements had expanded the industry as far as possible. Until the beginning of the 1930s there had been a stream of management requests to expand maximum planting areas and to start factories in new areas as completed or proposed irrigation

developed.³³⁰ In his 1931 transfer report, the Governor of East Java listed twenty expansion requests that were currently under consideration from the roughly one hundred factories in that Province, and remarked that several others were temporarily halted.³³¹ In 1928 four of the five factories in the Banyumas area had made requests for expansion. One Administrator had even applied to set up a new factory. In 1931 requests for major expansions of planting area were still being received from factories that would stop operations within a year or so.³³² Requests for expansion in areas previously not used for sugar, such as in North and South Bantam, further north and west of Cirebon which at that time was roughly the western edge of sugar and in the Preanger Residencies of West Java, had been included among those for extensions of existing areas such as in Kedu. The HVA in particular applied for huge new area in South Bantam, next to its existing *Djatiroto* area towards the furthest end of East Java, on the island of Sulawesi, as well as a proposal to expand jointly with the Ament factories into territory near Cirebon.³³³ If new projects required irrigation schemes, the anticipated cost would be shared by the developers and the state, with the former contributing proportional to their share of the resulting water or more. This could cost factories up to hundreds of thousands of guilders; millions where several factories were involved. There were some cases, such as *Trangkil* and *Langsee*, where the unpredicted consequence of the Great Depression was the closure of factories before they could benefit from the new irrigation and expansion they had optimistically paid for.³³⁴ In some cases applications involving development payments in newly opened areas claimed unacceptable extra conditions in their bids. For example, the HVA wanted long-lease rights in East Java and, on Sulawesi, the rights to all monsoonal irrigation water and a ban on the local population planting between cane-growing. Both conditions were refused, the former by the Governor-General after a People's

³³⁰ For a brief colonial survey of irrigation projects see Van der Meulen 1940, and for a detailed recent analysis of their development see Ravestein 1998.

³³¹ MVO Gov. Oost-Java 1931: 8-10.

³³² Eg. MVO Noord en Zuid Banjoemas 1931/2: 29-30, re *Kaliredjo*, *Bodjong*, *Poerwokerto*.

³³³ See *Archief* 1927: 893; *Archief* 1926: 279; MVO Indramajoe 1931.

³³⁴ MVO Resident Rembang 1931: 7 and subsequent Japara-Rembang MVOs.

Council debate and on a Native member's motion that it would be disadvantageous to local population interests that was passed in a 27:4 vote. Applications had to be investigated by European government officials both on technical grounds and on their predicted effect on the local populations. This process could take several years and most applications were refused. As a demonstration of the time that could be involved, when the government decreed the halting of further expansions of plantings at the beginning of 1933, they stopped the processing of dozens of applications, most of which had been continuing for several years, the longest for nearly a decade.³³⁵ The government was not opposed to expansion on principle. Some government officials were in favour of sugar plantation expansion because, by increasing scale, this assisted the necessary reduction of cost prices without reducing the amounts paid to Natives for wages and land-leasing. In fact, possibly even increasing these payments as expanding plantations competed with each other. Another reason the government supported expansion and new requests was that the factories would pay for the infrastructure they needed, such as bridges and irrigation, which was then useful to the Native population.³³⁶

The most obvious change in numbers of factories during the 1920s was when the expansionist HVA started large new ones. It had continued its long-term plans for expanding its East Hook complex, first setting up *Djatiroto II* in 1922, followed by *Goenoengsarie*, which milled from 1927, *Semboro* from 1928 and *Bedadoeng*, from 1929 - all very large factories. The HVA had also opened *Koenir* in 1930 in its Kediri plantation complex, mainly as a supplementary mill for the "surplus" cane produced by the more productive POJ 2878 harvests from two existing factories' plantations.³³⁷ The Colonial Bank had first milled in 1922 at the small *Sedang-pitoe*, set up on one of three

³³⁵ See 1933 transfer reports of the Governors of East Java: 49-50, 52-4; and of Central Java: 73-80.

³³⁶ Eg. MVO Res Banyoemas 1925. For opposing and less convinced Native opinions about general benefits for "small people" (orangkecil) see *Neratja* 12/4/1924 and *Sinar Hindia* 7/1/24.

³³⁷ *Archief* 1930: 548-53.

nearby tobacco plantations the Bank had bought and converted to cane in 1920. The other two were added to the plantation area of its *Medarie*.³³⁸

The other changes had been the half dozen closures that occurred when factories expanded and took over the planting concessions of, usually small, neighbours. *Seboroh* was closed in 1922 and its planting taken over by the larger Van Krieken heirs-owned *Padjarakan*, both represented by the NILM. Also in 1922, the Principalities Plantation Company's *Sedayoe* was converted into a cane estate milled by its same-company neighbour *Rewoeloe. Tjeweng*, which had milled cane from both the Tjeweng and Lestari land concessions from its 1884 foundation until a new *Lestari* factory had been started in 1910, was united with its newer and larger sister in 1924. The NHM, which had operated *Tirto* from the nineteenth century, combined it in 1924 with its slightly larger *Wonopringgo* into a single operation of about double the size, with some of the latter's planting concession officially transferred to the nearby *Soemberhardjo*, also NHM-owned. By the mid-1920s the NHM had also absorbed the tiny *Bandjoepoetih*, previously de Kock van Leeuwen family-owned and administered, into *Petjangaän*, then added the very small Chinese-owned *Nieuw Losari* into its large *Nieuw Tersana. Badas*, which had been bought by the HVA by 1916, was absorbed into its very large *Garoem* in 1927. The Japanese-owned *Soemengko* was closed in 1928 and its planting concession was divided between the surrounding factories, two owned by Eschauziers and one by the NHM.

There were other technical developments during the 1920s. As well as expansion of factories by additional and replacement machinery, several were rebuilt or re-equipped.³³⁹ The managements' collective Research Station had continued to provide the latest advice and practical, handbook information on all aspects of the Java industry (Handboek 1905/38). Factory managements acquired telephones early in the

³³⁸ Hirsch to Ramaer (letter No.S 247) 16/9/1920.

³³⁹ Including *Gesiekan, Gedaren, Petjangaan, Redjoagoeng, Tjepiring, and Tjomal*.

1920s.³⁴⁰ Later, by the mid-1930s, international airmail provided faster detailed management communication between Java and the Netherlands. Transport by cars, later trucks and buses had become part of the industry. Although plantations increased in size by about a fifth, reaching an average of 1550 hectares, over the decade, they could still be worked through one factory due to development of processing equipment and increasingly cost-efficient transport.³⁴¹

In the late 1920s the rapid increase in production through the new POJ 2878 cane variety was made possible by the peculiar management of the Java industry, which combined agricultural research with the organisation of this research and the compulsory single crop rotation system. Almost the entire industry converted to this variety in only a couple of seasons. In 1926 only 0.75 per cent of plantings were with POJ 2878, in 1927 12.5 per cent, in 1928 66 per cent, and in 1929 92 per cent. The Research Station claimed that it was its wide-ranging trialling programme, systematically integrated across the industry's own factory test-fields, that had so clearly demonstrated the generality in the variety's superiority.³⁴² The rapidity of the switch was allegedly possible only because the industry was based on annual new plantings and had an appropriate seedling system to support this.

The sugar industry now supported several machine factories, including Braat and Kali Mas in Surabaya with Bromo in Pasuruan, that produced and repaired equipment for it on a major scale. For example, in the 1926 jubilee publication of the Braat machine factory twenty five different factory names are identifiable in photos showing heavy equipment for sugar factories; each large item with a factory name and delivery date chalked on it.³⁴³ Also, local engineering companies tendered competitively to construct buildings and conveyer systems.³⁴⁴

³⁴⁰ Since the late 1890s telegrams could be sent, but only to and from the nearest railway station. (See the information given about each factory on the Syndicate's regular list for 1896, 1899, 1920, 1925.) The public telegraph system did not provide secure confidentiality.

³⁴¹ See Appendix 19.

³⁴² *Tanjong Tirta gedenkboek* 1930: 31; Konigsberger 1932.

³⁴³ (Braat 1926.) The current Chairman of its Board was P.J. Stok, an ex-Administrator.

³⁴⁴ See the advertising pages around the *Archief*, mostly removed from those now in libraries, and in *De Suikerbond*; and the mentions in *Zeverijn* 1920. The latter was a description of a

Nevertheless, limits were accepted. Large companies did not attempt to expand by taking over or merging with others. Unlike those of the NHM, HVA, Colonial Bank or Internatio, the shares of the smaller sugar factory-owning companies continued to be closely held and not traded on the Amsterdam or Surabaya stockmarkets. Management never attempted to increase sales by marketing strategies or increasing consumption. BENISO declined a request to support a 1930 exhibition in Amsterdam intended to increase Dutch sugar consumption. BENISO annual reports occasionally noted possible new markets for sugar, such as in ice-cream in America and for alcohol production for motor fuel, but never reported any moves to support them. Also, characteristically passive, was an optimistic mention of possible new uses for Dutch wheat, which could increase its planting at the expense of Dutch sugar beet.³⁴⁵

The Java sugar industry remained limited to Java and did not expand into other countries. At the worst of the Depression-induced unemployment, some discharged European employees went to British India to work in the expanding sugar industry there. How many is not known.³⁴⁶ Also, the possibility of one or more Java sugar producers taking part in setting up a sugar factory in British India was raised at a BENISO meeting, "to get a finger in the pie" of its own expansion and consequent diminution as a Java sales area. There was a little support but more general disagreement. The Director of several companies (Dólleman*) said he would consider this for his own business and a Director of the Colonial Bank (Labohm) mentioned that his Bank and the NI Trade Bank (NIHB) were interested in some participation in a factory in Siam, but no action appears to have followed.³⁴⁷

The sugar plantations and factories were frequently represented as the epitome of Western culture in their technology, organisational rationality and productivity. A characteristic element of this was that all levels of management continued to operate

rebuilt factory by the factory's engineer - closely followed by a subsequent angry letter from its Administrator that the account had not been authorised. There are several other references in internal company documents to the acceptance of tenders.

³⁴⁵ BENISO annual report 1929; BENISO Management meeting 29/11/1934.

³⁴⁶ BENISO members were sent two circulars about this near the end of 1937.

³⁴⁷ BENISO Management Committee meeting 26/8/1935.

from a culture of caution and conservative calculation. Management's approach to mechanisation was a good example of its general approach to any other possible innovation - based on openness and financial calculations. If replacing a more labour-intensive process with a more mechanised one was demonstrably likely to be more profitable it would be done, if not it would not be. Novelty and competition to be at a technological leading edge were not the usual criteria for choice. Processing and mechanical ground-working methods were continually tested and reported on, in similar but far more limited ways to new cane variety trials. If the detailed production and cost results did not show advantage over current methods the new method was not adopted. Reports on mechanical ground-working appeared steadily, first from individual Administrators then from Syndicate-sponsored trials and later from Research Station staff reviews. They tended to be more optimistic when Native labour appeared more difficult to find and retain and less enthusiastic when the labour supply was secure. Managements never chose to introduce significant labour-replacing mechanisation into agriculture as it did in transportation, where cattle and oxen were partially or completely replaced by locomotives in cane and other bulk transport out of or into the fields.³⁴⁸

C. ... AND FALL

The Depression in the Indies and the near collapse of the Java sugar industry in the 1930s is widely documented.³⁴⁹ It is not as widely recognised that problems for sugar had been mounting during the 1920s. The economic spike of 1920 had quickly reversed into a mild recession and European profit-shares had shrunk while Native

³⁴⁸ For more information on mechanisation see Appendix 19.

³⁴⁹ For one subsequent general survey of the indigenous economy during the Depression see Van Laanen (1982), for some regional political consequences O'Malley (1977). See Boomgard 1988 for an overview of the sugar industry, and the several works by Booth and Ven der Eng, and Maddison and Prince 1989 for more general economic overviews.

wages and bonuses had been cut back. Only in early 1925 was the recession declared over. Not long after that, in spite of the continuing reductions in production costs, selling prices and profits for sugar fell again.³⁵⁰ Decreasing demand and consequent lowering of prices in the major sugar export markets of British-India and Japan were reported in 1927.³⁵¹ Java's other major market, China, followed. In 1929 most companies made an operating profit, by 1931 practically all operated at a loss. Initially, operating losses could be paid from reserve funds so dividends were sometimes maintained for a short while.³⁵²

The industry's continuous flow of growing, harvesting, processing and selling was disrupted as massive stockpiles of unsold sugar accumulated.³⁵³ During a normal campaign the Java sugar industry formed an almost non-stop movement from field to ships' holds. The ripe cane was cut and transported to the factory where it was continuously moved between processing stations being converted into sugar. It was then bagged, railed to the ports and loaded into ships. About a tenth left the factories into the narrower and more complicated routes of local consumption. Until the 1930 harvest, little of the sugar produced for the export market was stored, other than temporarily at the factories then at the ports. This rapidly changed. By 1933 there was about as much stored as newly produced. In 1934 the stockpile barely changed while production dropped by over two thirds. Nearly four times as much remained in storage as was exported. Production was kept very low for the 1934/5 and 1935/6 crops while the stockpile was sold off, in 1936 roughly equal amounts were stored and produced.

³⁵⁰ The average profits (in guilders/quintal crystal) from 1920 to 1929 were f.17.60, 4.91, 0.98, 4.86, 7.03, 3.98, 2.10, 3.37, 2.12, 1.03. (Calculated from Appendix III of letter from Ramaer, Syndicate Chairman 24/10/1929 to Director of Government Businesses requesting a lowering of the government railway tariffs for sugar transport. Enclosed in Secret Mail Report 1208x/29 to Minister of Colonies. This Appendix also gives the average cost and sale prices for those years.)

³⁵¹ *Archief* 1928: 373.

³⁵² Manschot 1932.

³⁵³ "Production, export and prices of Factory-made Sugar in Java 1913-1939", *The Netherlands Indies*. Bulletin of the Colonial Institute, Amsterdam. III (3-4, June-August 1940: 206-7).

By 1937 a relatively small stockpile remained and production increased again.

However, it increased only to less than half of the former maximum.

Export values, and consequently income, dropped by nearly ninety per cent from 1929 to 1935. Profits turned to losses, so dividends, profit shares and bonuses disappeared. The number of factories operating and thus paying Natives wages and ground leases, dropped from one hundred and seventy nine at the beginning of 1930 to thirty seven by 1936. Even these were operating at only part capacity. "Normal" planting, about 200,000 hectares, was maintained until 1931 then cut by about a sixth in 1932, three fifths by 1933 and over four fifths by 1934, before increasing again - but only to about two fifths of the previous "normal" by 1936 and thereafter.³⁵⁴ In several regions, such as the Principalities, the situation was even worse than the overall picture.³⁵⁵ In some regions all planting stopped and all factories closed for at least one season. With reduced, but more productive, plantings and other cut-backs the average number of Natives employed at each operating factory decreased steadily from nearly a thousand in 1930 to just over seven hundred in 1934. About a third to a quarter of them were permanent employees, but these figures of "employed" do not include the larger numbers in groups of casual piece-work campaign workers.³⁵⁶ In some areas most casual labour had been local, while other areas relied on imported labour. Large variations marked the campaigns. About twice as many workers were usually employed in the April-June period than in the July-September period.³⁵⁷ In successive years from 1930 the payments made directly to Natives dropped: by twelve, forty,

³⁵⁴ Syndicate Report 1932-3: 1; Van Dijk and Nicola 1937; Booberg and Marches 1940, Marches 1940.

³⁵⁵ O'Malley 1977: 216, fn 105, quotes government figures showing a drop in the Principalities planting area of 94% from 1930 to 1935.

³⁵⁶ As planting was reduced it was concentrated on the more productive fields, producing a higher yield/area and allowing a proportionally greater reduction in cultivation work than in harvesting and factory labour. Eg. From 1931 to 1933 *Sindanglaoet's* planted area was reduced to 97, 63 and 44% of the 1930 figure and its cane yield/hectare increased to 104, 114 and 122% (*Sindanglaoet* annual report 1933/4: 14, 16). For further information about the early consequences for Native workers see Secretariat 1932/3, and for figures on the changing numbers of Native employees see the Syndicate annual reports.

³⁵⁷ Secretariat 1932/3.

seventy three and then eighty seven per cent.³⁵⁸ The number of Europeans employed dropped from 4027 in 1930 to 3509 in 1932, 2180 in 1933, 1025 in 1935 and 1000 in 1936 before increasing again - but only to 1500 by 1938.³⁵⁹ In 1934 clearly more were employed by the Royal Dutch oil company alone than in the whole of the sugar industry. By the late 1930s the industry had been reduced and consolidated to less than half what it had been at its maximum. It never rose again.

This near-collapse of the sugar industry was traumatic for local Native economies and state revenues. In their areas the sugar estates had been the largest or, after rice, second largest means of existence for the local population. Local economies depended on them for cash income. The effect of the cut-backs on local Native economies differed between sugar areas with different land-ownership, population density, and locally available means of existence. However, during the early and mid-1930s the seriousness of the regional consequences of the factories' restrictions and closures was made very clear in the official transfer reports of the senior European officials of all areas with sugar plantations.³⁶⁰ The cuts also had major implications for state taxation and other receipts.³⁶¹

Final planting and production decisions were made by the Directors of owning companies, not by Administrators. By the 1920s this meant decisions were being made in city offices in the Netherlands or Java, not in the factories.³⁶² An obvious consequence during the Depression years was that those in the factories were forced to

³⁵⁸ Calculated from table on p 41 of Netzell de Wilde and Moll 1936.

³⁵⁹ Derksen 1938: 30-32, using government figures including those based on the compulsory reports from companies.)

³⁶⁰ Eg. MVO Gov Oost Java 1931: 4-5, 33; MVO Gov Midden Java, 1933: esp.59-83; MVO Res Pekalongan 1931: 29-32; 1936: 29ff; MVO Res Rembang 1931: 10; (Japara-Rembang) 1932: 15; 1936: 94, 151, App X; MVO Noord en Zuid Banjoemas 1931/2: 30; MVO Res Bagelen 1932: 21-2, 34-7; MVO Res Kedoe 1933: 30; MVO Res Cheribon 1933: 20, 27, 31; 1936: 14. They commonly cited the figures collected by the SWB's Economic-Statistics division and published in the Syndicate annual reports.

³⁶¹ Eg. Hopster 1932/3. Company, income and other taxes, export and other duties, railway and other charges were all hit massively.

³⁶² This same point was made by Boeke, more rhapsodically, many years ago (Boeke 1953: 224-5).

wait to be told whether there would or would not be a planting and campaign in the forthcoming season.

D. REPRESENTATIONS OF MANAGEMENT

After the industrial strife of 1920, and in view of the revolutionary and near-revolutionary news from Europe, management had taken more systematic and active notice of the politics of its place in the colonial Indies. It had realised that the sugar industry's vital social and economic role in Java needed to be more clearly recognised. Mainly through the JSWB, information had been collected and disseminated to management about the particular world of the sugar industry and the wider social and political issues in which labour relations were defined, interpreted and evaluated. Within a year a series of supplements (*Bijblad*) to the *Archief* had printed a range of articles and reports considered to be relevant to management. Their topics included labour relations in other tropical sugar countries, state involvement in industrial mediation and arbitration labour councils such as were being instituted in the Netherlands, social laws, strikes in general and the 1920 strikes in the Java sugar industry in particular. They also included the major employee benefits such as medical treatments, education and subsidised food already provided by sugar plantations, the principle of compulsory profit shares for the local population, and the Sugar Enquiry Committee's report. An underlying theme in this flow of information was that government intervention into the autonomy of management was undesirable. Although these and other publications informed their readers about other places they had not encouraged a simple acceptance of any innovations. Instead they reflected a shared assumption that the Java industry was unique relying as it did on renting Native land and local labour in an un-developed non-Western non-industrial society.

Two potential justifications for government intervention in management at the beginning of the 1920s had been neutralised. One was the 1918-21 Enquiry into the

Sugar Industry, set up in response to criticisms, mainly expressed through the Native Movement members on the People's Council, of irregularities and undesirable influences on local populations. With sympathetic committee members, submissions and assistance from management representatives the report had effectively exonerated managements, putting most blame on local Native officials and village leaders.³⁶³

The other government threat had been the incoming Governor-General's resurrection of the proposal to regulate some sort of compulsory payments to land-leasers or casual workers.³⁶⁴ This was intended to extend the benefits of profits beyond European shareholders and employees and the Native permanent employees now receiving wage-linked annual bonuses as decreed by the JSWB. Most higher management opposed the suggestion. The Sugar Union-associated *De Indische Courant's* first issue had agreed with incoming Governor-General Fock's plan, but advocated paying Europeans directly and Natives through local infrastructure improvements.³⁶⁵ Eventually, after some years of delaying debate and opposition from "sugar circles" and other colonial business interests in both the Indies and the Netherlands, the proposal had been watered down to factories voluntarily paying for local infrastructure improvements in negotiation with European officials.³⁶⁶ The Syndicate and BENISO had carried out a lengthy and wide survey of opinions, including from the press, in formulating their position.³⁶⁷ A central Syndicate advisory committee was set up in 1925 and continued into the 1930s. The Colonial Bank-related factories had been providing and urging such infrastructure funding for several years, apparently initiated by its Agent J.J. Benjamin, while an unknown but apparently small number of others had made less well-known arrangements.³⁶⁸ Under the more

³⁶³ See Verslag 1921; Syndicate Report 1921; and the selections published in the *Archief Bijblad* (Sugar Enquiry Report 1921).

³⁶⁴ Fock, the new Governor-General, had first raised the proposal with his predecessor, Van Limburg Stirnum (who had then moved unsuccessfully towards introducing versions of it) in 1919 when Fock had been in the Dutch Parliamentary Second Chamber.

³⁶⁵ *De Indische Courant* 15/10/1921.

³⁶⁶ See Locher-Scholten 1981: 102-3 for a brief account.

³⁶⁷ BENISO 1925.

³⁶⁸ *Archief* 1931: 2.

general scheme, many factories provided continual financial grants to approved local projects after discussion with government. Also, individual or combined companies had provided new or improved educational and medical facilities, including hospitals. The first major hospital was built by the HVA in 1908. The relative quality and reputation of new provisions were at times propounded and defended as a way of competing and point scoring within the industry.³⁶⁹ The industry's provisions for the benefit of local Natives were cited in BENISO and Syndicate reports and described fully in the publicity material published in the Indies and the Netherlands by these collective organisations. These included the books by Tichelaar (1927a) and Van der Mandere (1928), employees of the Syndicate and BENISO respectively.

In the more contested political system of the 1920s, management gave more attention and resources to public representation of the industry as a major and vital contributor to the Indies population and to state revenue. The publicity surrounding the provisions of public infrastructure was part of this representation. Also, in the time of industrial conflict and associated competing representations, it had been suggested that the industry should make more plain its financial contributions to the State budget and the Native economy. The rapid setting up of the Economic-Statistics Division of the new JSWB provided for continual production and publicisation of detailed statistics. These were subsequently used by management in both countries to advertise their contributions. Each year the calculations had usually shown the industry contributing, through a wide variety of taxes and charges, well over a quarter of the Indies State budget. It was also shown to be the largest non-government payer of money to Natives for wages, rent and various supplies. It usually paid about four or more times as much in wages and piece-work than in land rent.³⁷⁰

The Syndicate also subsidised publications with supportive editorial approaches. At first it had paid subsidies to the political party PEB and to the Dutch-language *Soerabaja Handelsblad*, then to the *Nieuwe Soerabaia Courant* which it had

³⁶⁹ Eg. See the exchanges in Penris 1928a, 1928b, 1929; Roelink 1928a, 1928b.

³⁷⁰ See the Syndicate annual reports.

bought, in part to counter the *Indische Courant*. In upper management circles it had been agreed that

the form of government in the Indies was changing from a bureaucratic government to one increasingly open to the making of demands by all interests. Thus although the Java sugar industry was now in a time of relative calm after being the object of attack of left and left-oriented interests there was a need to continue and strongly develop the influence of the industry on the press.

(Circular B924 from JSWB Chair to its management members, 14/4/1923)

In 1923 the JSWB had discussed its subsidised propaganda activities. It was considered that the PEB was not worth the money it was being paid. Wide consultations with the Chairmen of the Departments, who were Administrators and "practical men", had indicated that the PEB's activities were either not noticeable or, in the opinion of some Administrators, were worse than useless as they were producing unwelcome reactions and should be stopped. Moreover, some thought considered that the propaganda service was more a propaganda service of the PEB Chairman, Engelenberg, than of the PEB itself. This dependence on one man was shown to be a fault, when he went to Europe and there was no other leader. The *Nieuwe Soerabaia Courant* newspaper, bought by the JSWB in 1921, "had cost us much money"³⁷¹ Influence on editorial policy was defended as being only on what was *not* published. As one member remarked: "Although it is claimed that the NSC is always too much on the side of the sugar industry - no - but it is never against it". One outstanding exception was an article on profit-sharing that had come from the contributing editor in the Netherlands, subsequently sacked. In 1922 the industry had contributed a subsidy of about f.38,000 plus the salary of the editor, Zentgraaf. They paid the subsidy partly to keep the paper's subscription price no higher than that of its main duelling partner, the

³⁷¹ The JSWB had bought the NSC in April 1921, partly to forestall the Sugar union which had been trying to buy it since October 1920, partly to ensure it had a "friendly" paper in Surabaya. The Java-Bode in Jakarta was later also bought by employer-interests (Bosma 1997: 327-8).

Sugar Union's paper *De Indische Courant*. At the time, it was noted with concern that the *Indische Courant* had 4000 subscribers whereas the *Nieuwe Sourabaia Courant* had dropped in subscription from 3200 to 2500.³⁷² Other attempts were also made to influence press coverage. As well as from the *Java-Bode* the JSWB could largely assume a usually favourable editorial position from the Jakarta *Bataviaasch Nieuwsblad*. It also brought out a Rotterdam journalist, J.H. Rittman, partly to edit the *Archief* but mainly to provide the Indies press with favourable information.³⁷³

Management was also involved in other activities intended to "define the situation" according to its views. From 1920 the Syndicate Chairman had sat on the People's Council to guard and advance the industry's interests. However, during the 1920s this had been found to take too much time from his other responsibilities so, for the 1928 Council and thereafter, non-Syndicate men had been selected for this role by agreement between the Syndicate and BENISO. Upper management also made attempts to increase favourable publicity through involvement in exhibitions and to suppress potentially unfavourable publicity in other countries. As one example of the latter, an ex-employee in London was privately sent to counsel an enquirer from the British Chamber of Commerce for the Dutch East Indies against speaking publicly about Java labour conditions, lest his comment were politically mis-used.³⁷⁴

Upper management was strongly involved in wider attempts to strengthen the position of colonial business interests against the governments' undesired policies, but the relationships and representations involved had become complex and full of conflict. BENISO took a major role in the 1921 formation of the umbrella lobby group, the Business Council for the Netherlands Indies (*Ondernemersraad voor Nederlands-Indië, ONRANI*), and the Syndicate followed with the group's Indies branch, the Indies

³⁷² Very Confidential letter from JSWB to BENISO Management Committee, No B924, 14/4/1923.

³⁷³ He edited the *Archief* from 1921 to 1924, reported from the People's Council for, among others, the *Bataviaasch Nieuwsblad*, provided material for the NSC and the BN, was the BN's Deputy Editor from 1926 then its Chief Editor when Zaalberg died early in 1928 (Bosma 1997: 328, 435).

³⁷⁴ BENISO Management Committee minutes 20/6/1935.

Business Union (*Indische Ondernemersbond, IOB*). The Chairman of BENISO headed the sugar industry interest section and was ex-officio ONRANI Vice-Chairman. A corresponding arrangement existed in the Indies with the Syndicate and the IOB.³⁷⁵ Both BENISO and the Syndicate had played important parts in these wider lobby groups until ONRANI Chairman Professor Treub's visit to the Indies and discussions with the Governor-General De Graeff in 1929. Both central sugar organisations then withdrew from their respective wider representation groups in protest over a mixture of policy differences, formal representation of sugar management interests to the governments, and conflicting rigid personalities. Rivalry over rights of representation of the industry's collective management interests had raged since 1928 when the Syndicate took a more antagonistic position than the IOB on the Government's labour contract for European employees. The Syndicate position had been expressed by its Chairman, H. Jelgerhuis Swildens, ex-President of the High Court and Member of the Indies Council. Treub and his local agent, the Chairman of the IOB, considered the Syndicate's position too cold and too narrowly representing shareholders' interests. In 1929 the Syndicate unsuccessfully put forward its Secretary to succeed the outgoing IOB Chair in opposition to the ex-senior official of the State Railways with whom sugar interests had clashed in the past chosen by Treub. The sugar industry had insufficient support in the umbrella organisations in Java or the Netherlands and, after Treub's candidate was elected, the Syndicate took its members and subscriptions out of the IOB. BENISO also left ONRANI.³⁷⁶ They rejoined the respective umbrella groups in 1932 after the death or retirement of the leading protagonists and the deepening of the economic problems of European companies, particularly the sugar companies, operating in the Indies.

Obviously, the various collective lobby groups had not guaranteed upper management could achieve its aims with governments. In the first half of the 1930s

³⁷⁵ Taselaar 1998: 108-22.

³⁷⁶ BENISO annual report 1929: 18, Byl. V-VII; BENISO 1932: 5; Taselaar 1998: 134-143; IOB 1921-38; IOB 1922-35.

Java sugar exports were disadvantaged because the value of the Dutch and Indies guilders was maintained against the Gold Standard. Competing interests in the colonial lobby and in the fragmented complexity of the pillarized Dutch society prevented the organisation of sufficient pressure on the Dutch government to devalue its currency until September 1936. The Netherlands was the last major trading country to drop the Gold Standard. In another case demonstrating the contradictory interests under the umbrella, BENISO rejected ONRANI's request to join in expressing concern about the increasing Japanese share of Indies textile imports. Although recognising the damage these did to the Dutch textile industry, collective upper sugar management considered this was outweighed by the advantages of a lower cost of living, thus wages, from cheaper materials. They also feared counter-restrictions in Japanese sugar imports from Java.³⁷⁷ The active influence of publicly competing ideologies in the Netherlands prevented the exclusive imposition of a single metropolitan ideology in Java. Apart, that is, from acceptance of repression of the overt independence movements which no significant metropolitan movements supported.³⁷⁸

The collective sugar management organisations had continually supported their members' interests against others' by lobbying and by providing legal resources, either from their own salaried staff or hired from outside. In an example of the latter, a Leiden University law professor advised that the government was not legally empowered to include requirements for profit-shares to Natives in its conditions for permitting sugar factories in a newly opened East Java area, a condition it attempted to impose in 1925.³⁷⁹ However, in the first half of the 1930s the organisations, funded entirely by subscriptions based on its members' planted areas, were severely crippled by the temporary or permanent cutbacks then closures. Major reductions in staff and

³⁷⁷ For further elaboration on the Gold Standard issue and on other related Dutch political relationships see Griffith 1987: especially chapters 1, 3-5; Blok et al 1988: especially chapter; Van Voss et al 1988: esp. Introduction; Fischer 1994; Taselaar 1998: 371-380. For further details of the changing market see Honig 1932; Iterson 1944; Korthals Altes 1979: 160. For the textile case see BENISO Management Committee meeting 8/1/1934.

³⁷⁸ The socialist party came closest but still did not endorse them (Hansen 1977).

³⁷⁹ *Archief* 1926: 508.

services included closing the *Archief* and the Economic-Statistics Division at the beginning of 1935. The Research Station reduced its staff and its range of activities, the Technical and Chemical Divisions were combined and the Netherlands Affiliate given up. This ended more than four decades of Dr. Prinsen Geerlig's formal involvement with the industry. The Director of the Technical Division, Prof. Ir. von Pritzelwitz van der Horst, resigned. The Director of the Agricultural Division, Dr. V.J. Konigsberger, was appointed Professor of Botany at Utrecht University, succeeding Professor Went, who had worked at the West Java Research Station many years before.

In addition, there were increasing attempts to impose confidentiality over the technological discoveries made by management's collective research system. Until this time there had been a world-wide openness in research related to the sugar industry. One effect of the worsened international situation was management's move to conceal potentially valuable technical information from international competitors. By 1928 BENISO and the Syndicate had been considering restricting the amount of information made public to potential competitors through their reporting. A ban on the export of cane seedlings or stalks had been put in place in 1929. Nevertheless, concerns continued that "new cane varieties could get into the wrong hands". Several years later a worried report that Natives were planting the latest Research Station varieties was investigated. With relief, it was found they were only using ratooning regrowth from material left after a completed seedling contract.³⁸⁰ Nothing was done about restricting scientific publication for some years. However, this was one of the reasons put forward for closing down the *Archief* at the end of 1934.³⁸¹ The many reports from the Research Station which had been included in the *Archief* as "Communications for the Members of the Java-Sugar Industry Research Station" (*Verhandelingen voor de Leden van het Proefstation voor de Java-Suikerindustrie*) would still be circulated,

³⁸⁰ BENISO 24/1/1935.

³⁸¹ Other reasons were its production costs and the decreasing number of local subscribers as the industry was reduced.

roughly fortnightly, to the Research Station members, but not to the wider network of previous subscribers to the *Archive*. It was felt necessary, "in these difficult times to try the most extreme secrecy ... from overseas subscribers"³⁸² The legal basis for this constriction lay in the Research Stations' statutes as a collectively owned and managed body, as only operators of Java factories could be its members. Each copy of the "Communications" was marked "Confidential" and declared to be on loan from the Research Station Association. Any use of text or diagrams was forbidden.

E. PUBLIC INTEREST IN THE INDUSTRY

Given the sugar industry's scale and importance to the economy and its unavoidable presence in the areas where it operated, there appears to have been surprisingly little public concern and debate about it among literate city-dwellers. Newspapers included only occasional references to the industry, usually more-or-less reprinted self-reports. An item referring to the starting of the campaign at individual factories or some information from an annual report was normally all that was published. This held even for *De Indisch Courant*, the newspaper intended for European employees. Only occasional exceptions include the speeches delivered at the 50-year anniversary celebrations of the HVA in 1929 and Walraven's melancholic portrayals in 1939 of sugar areas after the factories had stopped operating.³⁸³ The major newspaper cuttings collection of J.E. Stokvis, the socialist politician and editor of the time, were divided into sections such as "industrial relations", "strikes", "trade unions", "coolie disturbances in the plantations", and "the influence of the so-called extremist movement among the coolies". This collection included hundreds of items culled from the major Dutch- and Indonesian-language papers from the early 1920s to 1930. The

³⁸² Confidential Analytic Report No XVI/1934. BENISO Management Meeting 29/11/1934. The information about the copies is from my direct inspection of examples.

³⁸³ Respectively, "Bij het Vijftig-jarig jubileum der HVA", *Indische Courant* 2/1/1929; *Indische Courant* 23-25/3/1939, also reprinted in Walraven 1998: 127-42).

collection includes a very large number and variety of references to Sumatra but, in remarkable contrast, items referring to the Java sugar industry are conspicuously absent. The exception referred to the Syndicate's offer of mechanics to the government railways during the 1923 railway strike and the European sugar union reaction to this. Industrial relations and other management activities would have been of great interest to Stokvis so the lack of material in his collection is remarkable. Also, my reading through a wide variety of magazines and journals in Indonesian and Dutch published during the 1920s and 1930s, including by various European and Native political organisations, found a remarkable paucity of news, features or any other information specifically about the sugar industry or its management after the industrial disputes of 1919-20. There appears to have been a pervasive lack of interest among their editors and readers.³⁸⁴ A search of literary, pictorial and musical material, through subsequent collections, records and descriptions, also failed to uncover significant references to the sugar industry.

³⁸⁴ Apart from in the sugar employer and union journals (the *Archief* and *De Suikerbond* in Dutch, the short-lived PFB's *Boeroeh Bergerak* and briefly published radical *Doenia-Merdeka* in Indonesian). The following were read (in the National Library of Indonesia) in an attempt to find references to the Java sugar industry which could indicate expectations of interest among their readers. (The dates are of years consulted.) *Angkatan Moeda* (1939-41, organ of Indonesian Islamic Union Party youth wing); *De Bestuurgids voor Inlandsch Ambtenaran* (1927-8); *Bintang Hindia* (1927-30, illustrated weekly); *Bintang Pagi* (short-lived in 1929, Chinese-Indonesian); *Het Bondsblad* (1919-20, organ of the right-wing anti-Bolshevik Indische Bond); *Nederland Djawa Tengah* then *Djawa Tengah Review* (1926-7, Chinese-Indonesian); *Garoeda Pusaka* (1933, organ of Young Indonesia); *Goenoeng Djati* (1922); *De Indische Beweging* (1917-8, organ of the Insulinde Association); *Het Indische Volk* (1927-31, organ of the socialist ISDP); *Kamadjoean* (1927-31, Chinese-Indonesian); *Lasjkar* (1929-31, an organ of the Sarekat Islam Party then Sarekat Islam Indonesia Party); *Mardi Oetomo* (1922-4, organ of one of the undiplomaed Native officials' unions); *Mata-Hari* (short-lived 1934, 'modern') *De Nationaal Socialist* (short-lived in 1936, organ of the Surabaya Circle of the Dutch National Socialist Movement); *De Nederlandsche Leeuw* (1933-4, organ of the Fascist Organisations in NI); *Neratja*, later *Hindia Baroe* (1920-24); *Oetoesan Hindia* (1922-4, edited by Tjokroaminoto); *Pemimpin* (short-lived in 1921, edited by Soerjopranoto and Marco, mainly the latter, then by Abdoel Moeis); *Penjoeleh* (1933, 1939, organ of a progressive Native association in Djakarta); *Persatoean Sekerdja* (1931, organ of PVPN, the State Native Employees Federation, edited by Soerjopranoto); *Soeara Boeroeh* (1920, organ of the Semarang Native Port Officials); *Soeloeh Indonesia Moeda* (1930, the journal of Soekarno's association); *Soeloeh Rakyat Indonesia* (1927, organ of the Indonesian Study Club, Soerabaja); *Soeloeh: Soeara boeroeh* (1940, a socialist paper).

However, considering only published material is not necessarily an adequate guide to the thoughts and concerns of most of the people then involved in the sugar plantations and factories. Most of those classified as European men and a large majority of the women could read, a majority of Chinese men and a small minority of women could, but almost all Natives could not.³⁸⁵ In the sugar industry only a handful of "Native intellectuals" or "educated Natives", mostly employed as assistants in the laboratory, clerks or draftsmen in the office or working with a field or similar European supervisor, would be comfortable with reading and writing. Apart from these men, few natives understood the Dutch of the management. Most communication was in versions of local languages. For most people what was written in Dutch or in Indonesian newspapers, pamphlets or magazines would have to be read for them - and probably interpreted into their language. Unlike the management with its manipulation of written information, most of those they managed lived through oral cultures.

F. NON-GOVERNMENT CHALLENGES TO MANAGEMENT

(i) European staff

As had been demonstrated in 1919 and 1920, the higher levels of management could be effectively challenged by the lower levels of factory and field management staff organised in the Sugar Union. However, after the aggressive militancy of that time the Union had gradually become a more conservative organisation.

³⁸⁵ Yogyakarta was considered a centre of Native and European education but the 1920 Census reported only about 5% of adults were literate in any language (0.67% in Dutch). In the late 1920s in the Pati area literacy among Europeans was reported as 84%, for Chinese 34%, for Natives 3% (5% male, 0.2 female). For the whole population of Java it was 3%. 76% of the Pati Europeans "understood Dutch" as did 3% of Chinese and only 0.11% of Natives (0.13% across Java). 4% of the literate Natives both in Pati and across Java "understood Dutch". (See O'Malley 1977: 213, fn 80; MVO Ass-Res Pati 1926/8: 21.)

There was only ever one European strike recognised in the industry, which had failed. At *Perning* in 1921 a dozen employees had walked out and gone to the Sugar Union's office in nearby Surabaya. Although they were then supported by the surprised Union, they did not achieve their purpose. The majority were sacked but, except for a couple of leaders, eventually returned and were re-employed. For a while the Union employed the leaders, who were not acceptable to their previous, or other, factories. The walk-out was sparked when the factory appointed a First Employee who was not a Sugar Union member, stating that such membership was not compatible with a position that might deputise for the Administrator. The Union then discovered that a similar policy had secretly infiltrated several companies and become JSWB polic³⁸⁶

Internal conflicts in the Union were caused by ideology, relations between its two or three employed officials and members, use of its reserve funds to subsidise the new *De Indische Courant* daily paper and the editorial ideology of this newspaper and continued into the mid-1920s. The Sugar Union was the paper's main financier and controller.³⁸⁷ Set up in 1921 following a short-lived European union federation paper *De Federatie* in 1920, its office was in the Union's Surabaya building. Its claim was to be "the paper for all employees" and was set up to provide an alternative to what was perceived to be an anti-union bloc of Dutch-language papers.³⁸⁸ The editorial approach was consistently more employee-oriented, internationally and locally, than other major Dutch-language papers. As was normal in the Indies press, it frequently attacked competing papers and was attacked in return by them. There were no equivalent Malay or Javanese papers, only organs of various political organisations. It appears that in the *Courant's* early years much of its intended readership was more politically conservative than its politically socialist editorial ideology, a difference reflected in a severe decline

³⁸⁶ Eg. *De Suikerbond*, Bylage 6/6/1922).

³⁸⁷ For a celebratory account of the paper see Cornelis 1927. It had been set up after the Sugar Union had tried and failed to buy the existing *Bataviaasch Nieuwsblad* and *Nieuwe Soerabaja Courant* in October 1920 (the latter bought by the JSW in April 1921 to forestall the Union's near completion of the purchase) and the *Bataviaasch Handelsblad* in November 1920 (Bosma 1997: 327-8).

³⁸⁸ Bosma 1997: 324. For a wider account of the employer-employee politics of the press around this time see Bosma 1997: 321-9, 'Vakbeweging enpers'.

in subscriptions to the paper. Many Union members rejected socialism believing it showed too much empathy and support for Native workers and presented common class interests too strongly as compared to differing ethnic interests. These conflicts ended in the defeat of the more socialist factions and the sacking of D.M.G. Koch, ideological leader and editor of the East Java edition of the newspaper, and his replacement with the West Java editor.³⁸⁹ One example of change over the decade is that, in 1930 the *Indische Courant* printed an uncritical report of ONRANI Chairman Treub's speech to the organisation's AGM. This differs remarkably from the paper's strongly combative stance when ONRANI was founded ten years earlier as an umbrella organisation for colonial capitalist interests.

After the early 1920s the Sugar Union emerged from its internal conflicts as more conservative and less oppositional. Internal legal actions, the forced resignation of its salaried official-holders - the more moderate Burger and Van Ruyter, who had been its leaders during the earlier struggle with employers - and a short unstable interregnum were followed by a calmer acceptance of a new industrial relations regime in the ethnically segmented colonial economy. At the Sugar Union's 1929 AGM it was announced that "it had now returned to health, with the past attempts to promote the class struggle now over, ... [and an end to] previous destructive meetings. ... [Although] most Union members were not Marxist-inclined ... previous meetings had symptoms of sickness in the whole Union membership ... [However] still too many hold themselves aloof from the Sugar Union"³⁹⁰ The Union continued to attack more radically socialist interpretations and proposals, sometimes focussed on Koch. In the Union's journal, *De Suikerbond*, dismissive judgements, such as "starkly Marxist", were given to expressions such as "government is a tool of foreign capitalists", "exploitation for non-Indies capital", "government, under pressure from Treub (the ONRANI Chair)", and the proposal to leave European wages high and increase Native

³⁸⁹ For his own account see Koch 1956: 149-53; also Bosma 1997: 395.

³⁹⁰ See the Minutes of the Union's 1924 AGM *De Suikerbond* 1924: 146-79); *Indische Courant* 1/3/1929; *De Suikerbond* 1927: 5-6; 1931: 91-3.

wages up to parity, subsidise Native companies and erect tariff walls. "Too theoretical", "utopian", and "ineffective in the European union movement" were among other epithets.

Ethnic segmentation became more defined and more grounded in perceived interests within the Indies. The Union or the paper denied they had ever supported European and Native employees being in the same union or advocated that Europeans should actively sympathise with Native strikes. The *Indische Courant* had also recalled that its founding declarations identified most European employees as "stayers" (*blijvers*) not "leavers" (*trekkers*), and gave priority to the interests of Indo-Europeans rather than the immigrant Europeans who could be expected to return to the Netherlands. In 1927 there had been further debates about the desirability of expanding the European union movement into one for "head workers" by allowing the more educated Chinese or Native employees to take part. Differing from the Railway and the General Commercial unions, the Sugar Union's *Indische Courant* had come out against this, declaring the question was premature. The acceptance of some Native members into European unions was not a concern and there were already some cases of this. However, European employees were believed not ready to reach out to Native employees if their economic interests were affected. If the class struggle turned into a race struggle then - it was thought - the European employee, because of his origins, birth, culture and religion, would without hesitation range himself on the side of his own race. However, the Union remained conscious of basic class-relations as well as ethnic differences. Recognising that Europeans and Natives differed in background, training, race, lifestyle, social position, salary and aspirations, its journal warned against European employees making a basic differentiation into "European" and "Native" with an attendant industrial sense of noblesse oblige as they aligned themselves with the employers. Legally and economically they were still workers

(*arbeiders*), employees. One writer added that assertions of racial feelings smacked more of race-horses or noble hounds.³⁹¹

The continuing underlying relevance to management of ethnic categorisation, had been previously demonstrated. Ideologies of ethnicity were involved in the brief flare of industrial tension between levels of European management on the eve of the 1923 Railway Strike by Native employees. The upper-middle management Syndicate announced its willingness to provide technical personnel from sugar factories to support the government in breaking the strike, which threatened serious harm to the transport of sugar.³⁹² On the other hand, the lower management Sugar Union maintained a position of principled neutrality and objected to compulsion on its members. An unknown number of European volunteers were used. The strike was portrayed by Europeans as a creature of the radical and Communist elements of the Native Movement directed against the colonial system. The main organ of the Indo-European Union (*Indo-Europeesch Verbond, IEV*) had pointed to the loyalty of Indo-European employees of the railways, including offers of help from pensioners and IEV members.³⁹³

The Sugar Union had remained the most organised and central of the European private employees' unions, but within a couple of years of the 1919-20 struggle its membership had dropped from nearly universal to about half and then slowly continued to fall to about a third by the end of the decade. Nevertheless, it had defeated calls in 1921 for separate confessional unions as in the Netherlands, on the grounds they would weaken the movement, and demands in 1931 for a cheaper and more effective

³⁹¹ Eg. "De Richting van De Indische Courant", *De Suikerbond* 1924: 301-8; *Archief* 1927: 1216; *ibid* 1928: 371; "De Suikeremployé", *De Suikerbond* 1931: 276-8, reprinted from *De Indische Courant*.

³⁹² The Syndicate had also donated f.1000 to the Resident of Surabaya to buy "sweets and relaxation" for the military and police who worked hard during the strike. *Bataviasche Handelsblad* 17/5/1923).

³⁹³ *Onze Stem* 1/6/1923. (This paper was the main organ of the IEV.)

union.³⁹⁴ Its involvement with the *Indische Courant* paper continued and its own solid journal, *De Suikerbond*, continued to appear until the Japanese occupation.

With the establishment of the employers' JSWB in 1920, a partnership evolved. Although there had been continual complaints about employers opposing union membership, the Sugar Union Chairman made particular mention of the accommodating relations of his union with the JSWB and the IOB. The Union's advocacy for more employer recognition of the legitimacy of employees' associations was, however, limited to associations of European employees because, it was claimed, the development of associations for Native employees associations was still in its infancy.³⁹⁵ The Union and the JSWB continually communicated as mutually recognised representatives of each other's members; one for the European lower and middle management employees, the other for upper-middle and upper management. The JSWB set employment conditions on behalf of all its members, effectively extending to all factories, and the Union acted for its members as a complaints office in relation to adherence to these conditions, as well as continuing to propose improvements. If infringements were reported by Union members its officials acted by discussion and publicity, occasionally resorting to legal challenges. As already mentioned, in the early 1920s Administrators had legally challenged their employers over what should be included in the operating costs used to calculate their profit-shares. In the two test cases, both lost by the employers, the Syndicate provided and arranged extensive legal support to the companies while one of the challenging ex-Administrators was supported by the Sugar Union. This had added breadth to the more formally legalised industrial relations system within which management of the industry now operated.

Remarkably few other cases were reported. One involved the Director and Administrator of the Dinger-family's *Kenongo* factory underpaying a staff member, another involved the Oei Tiong Ham factories, owned by one of the few companies not

³⁹⁴ Eg. *De Suikerbond* 1921: 828-30; "De VVS", and "Bezwaren tegen den Suikerbond", *De Suikerbond* 1931: 266-8 and 268-9; *Scheurmakers* 12/3/1931.

³⁹⁵ *Archief* 1925: 1170.

a member of the JSWB. The complaints, Union actions, meetings and results were published in detail in the Union's *Suikerbond* journal. In the former case it was reported that, in response to the Union's moves, the JSWB had pulled the offending company into line and appropriate payments had been made. In the latter, after a meeting of the Union officials, who were armed with comparative material from other factories, the company Directors Oei Tiong Swan and Oei Tiong Hauw had agreed to become a JSWB member and that they would improve the European employees' conditions accordingly. This case followed earlier concerns about this company. As a multi-unit conglomerate it was able to use internal accounting transfers to reduce its publicly stated profits and thus the profit-shares for its employees³⁹⁶

As mentioned previously, in the interests of its members and to strengthen its power, the Union had urged the setting up of joint arbitration councils with employer and employee representation, modelled on European precedents. This was refused by employers. By the early 1920s it had similarly followed European developments by urging government intervention in employment conditions. In particular, the Union urged regulations for European sugar employees corresponding to the 1922 Assistants Regulations for the Sumatra East Coast tobacco and rubber plantations. As these Regulations involved an acceptance and a broadening of similar ones established three years before in the East Coast region round Deli, there was some optimism they would be extended again. However, apart from broad acceptance of legal recognition and a contents list for European sugar employment contracts, detailed regulation had been rejected by employers on the grounds of the variability of background, training and employment arrangements in the sugar industry and, they claimed, it was not needed. The government deemed the issues not important enough to press during the 1920s.³⁹⁷ Not until the mid-1930s, late in the Depression during which the Indies State moved

³⁹⁶ "De Dinger Suikerfabrieken", *De Suikerbond* 1921: 813-4; "De zaak der Oei Tiong Hammers", *De Suikerbond* 1926: 607-23; "Struisvogel-slimmigheid", *De Suikerbond* 1920: 831-4; *Archief* 1926: 1444; 1927: 314 (the latter two articles being references to complaints about the OTH included in the government Labour Offices 'Sociaal-Economische Overzicht' series).

³⁹⁷ *Archief* 1923: 706-7.

into more regulatory intervention, was much done. The extension of what had become the Planters Regulations was then discussed within and between upper management organisations, the Union and the government for several years until the Supplementary Planters Regulations were finally decreed in 1938. About two decades after its Dutch model, these established standard minimum employment conditions for all European or equivalent employees in all plantations, . Progress on the negotiations was reported in the management organisations' annual reports and the eventual Regulations re-printed triumphantly as a special issue of the Sugar Union's journal in February 1938⁹⁸

The expression "European or equivalent" in the 1938 Regulations is significant. In the mid-1920s there had been a partial redefining of an element of colonial economic relations from ethnically-categorised persons to ethnically-categorised occupations. In 1925 the government modified the law on employment contracts, extending it to cover those of "intellectual" Natives and Chinese who carried out work normally done by Europeans. Management did not have to employ Europeans to do European work, but any non-Europeans would have to be employed contractually on the same basis as Europeans if they did what was considered to be European work.

There appears to have been a fatalism among at least the lower and middle levels of management about the effects of the Depression. Reading through the Sugar Union's regular organ, *De Suikerbond*, it is clear that the cut-backs and closures in the 1930s were accepted as inevitable and irresistible, being due to the forces of international trade rather than local management actions. The perspective and discourse commonly used referred to international information. The woes in the Indies were not portrayed as merely local. Although Directors in the Netherlands were deemed to have more responsibility, the local Syndicate was not held up for blame. It was pointed out that there was not much future for careers in the industry and that as new employees were still being recruited from Europe. The paper hoped this would

³⁹⁸ Eg. see *Archief* 1926: 278; BENISO annual report 1935: 10; BENISO Management Committee meeting minutes 11/7/1935, 1/8/1935, 15/8/1935; *De Suikerbond*, Extranummer February 1938.

stop. It did, as did all new recruitment. The Union's stance was cooperative rather than oppositional.³⁹⁹ Where requested by members, it attempted involvement in negotiating dismissal or part-paid leave (*wachtgeld*), and arranged for some employees to stay in the factory housing of non-operating factories. Problems were reported from only a handful of factories, mostly Chinese-owned: the Djoengkaré factories; *Tjandie* and *Porrong; Baron, Djoewono* and *Koedjonmanis* - the latter five in two Chinese-owned groups.⁴⁰⁰ Standard pay cuts agreed after discussion between the Syndicate and the Union were criticised by some employees because they disadvantaged workers on the more profitable estates but defended by the Union with the argument that, without them, many others would be even worse off. Workers were told: "If you feel you are being treated unfairly by your employer - stay calm and get in touch with the Sugar Union central administration"⁴⁰¹

(ii) Native employees

Serious and widespread challenges from Native workers had died away by the mid-1920s as a result of various repressive measures by management and the government.⁴⁰² The managements' Syndicate and the Research Stations had given managements access to industry-wide information about technical and market elements of the industry in Java and, to a significant extent, the world. The role and resources given to the managements' JSWB had extended this to industrial relations and other personnel matters. Its Economic-Statistics Bureau had the authority to carry out and publish effective surveys of all members' factories, their Native and European

³⁹⁹ Eg. "Een Goed Woord in een Kwaden Tijd", *De Suikerbond* 1931: 274-5.

⁴⁰⁰ *De Suikerbond* 1931: 66-9.

⁴⁰¹ *De Suikerbond* 1931: 1023. See subsequent summarising of its activities in *De Suikerbond in 1937: La crise est finie ... Wat nu?*

⁴⁰² This situation applied generally in the Indies. Eg. see Ingleson 2000, especially pages 487-90. In 1919, in response to the post-war unrest, the liberal Governor-General Van Limburg Stirnum had introduced a Political Intelligence Service, provisions for stronger restrictions on the press and public servants (including Native teachers), and the semi-militarised Field Police (Locher-Scholten 1981: 91-93).

personnel and industrial disputations, especially Native strike activities. It became clear that the strike burst of 1920 had been an exception. Disputes defined as strikes had been reported by Administrators or Directors at only two factories in 1918, seven in 1919 and sixty five, involving seventy two cases, in 1920. The first JSWB report analysing these years was a long article. Subsequent annual reviews were much shorter, reporting seventeen in 1921, seven in both of 1922 and 1923, two in 1924, three in 1925 and one in 1926. No more such articles had appeared in the *Archief* but the annual reports of Syndicate and BENISO continued to remark that there were no significant industrial problems with Native employees.⁴⁰³ Managements had been subsequently troubled by far fewer, shorter strikes involving less workers and simpler demands. The long PFB list of 1920 did not reappear. Disputes had arisen about a variety of issues but they appeared to be increasingly incidental. Noticeably, colonialising ideologies underlay the defining of actual and potential Native industrial activities as quite different from those of Westerners, using constructs such as the "Native mentality", with its fatalism, lack of determination, effort, and active concern for the future.

After the challenging by Native employees in 1920, managements organised their collective industrial representation and response through their newly established JSWB. On behalf of its members, this organisation carried out surveillance of Native employees through its Fingerprinting Bureau and secret intelligence service. The former continued until the mid-1930s, the latter effectively for only a few years before declining and dying.

The setting up of the Fingerprinting Bureau by the JSWB provided, not only for identifying individual Natives but also for compiling written dossiers. Each employee's work history, including comments, could be recorded and retained in the system, accumulating with one or between successive employers until the employee's

⁴⁰³ Tichelaar 1921b, 1922, 1923, 1924a, 1925a, 1927b. Also see Syndicate annual reports, using Tichelaar's internal reports.

final retirement and/or death.⁴⁰⁴ Fingerprinting was introduced, with relatively little protest reported. One exception was at *Alkmaar*, where the Administrator announced the Native personnel was going to be cut by fifteen to twenty per cent but individuals would be kept if they would be fingerprinted. Eventually three foremen and tradesmen had been sacked over this dispute.⁴⁰⁵ As the JSWB's facilities were increasingly used by other major European employers employee movements between sugar and other "modern" employment could be tracked.

From its foundation the JSWB took over the Syndicate's "secret report" system of collecting, collating and reporting any Native activities considered threatening to management interests. The first short-lived system had reported only to the Syndicate Chairman, the subsequent one initially sent its confidential reports to members but later only to the regional Divisional Chairmen. It had been based on JSWB members, mainly Administrators, sending in information they obtained which was then edited and circulated. Specific detailed instructions about which organisations, activities, publications and people to report on were sent from the JSWB/Syndicate Chairman to the Divisional Chairmen. One copy of each factory's monthly report, including 'nil' returns, went to the Representative of the factory's company and another to the JSWB.⁴⁰⁶ At first there had been relatively little engagement with this reporting system, only about a quarter of Administrators sending in what were supposed to be regular returns. After a while the proportion increased, particularly when the HVA and Colonial Bank pressed "their" Administrators to be involved. However, although the reports provided plentiful material for a few years, little was directly related to the industry and Administrators' interest and involvement clearly dropped away.

For most of the 1920s these JSWB reports explicitly and implicitly provided Administrators and higher levels of management with a conservative interpretation of the "Native Movement". The JSWB members had been kept continually informed,

⁴⁰⁴ For the required administration of the system see Fingerprinting 1921.

⁴⁰⁵ *Oetoesan Hindia* 23/1/1923.

⁴⁰⁶ The list is in *Berichten aan de Voorzitters der Afdeelingen van den Java Suiker Werkgevers Bond* No 32, *Vertrouwelijk* No.A.2798, 30/7/1923.

from a biased perspective, about developments in the organisations of concern: the pervasive Sarekat Islam and its final split into more communist and more Islamic organisations; the cadre Indonesian Communist Party and its mass Sarekat Rajat (People's Union); the Kaoem Boeroe (Workers Association); the Kaoem Tani (Farmers Association); and, as requested, "any other associations set up with antisocial tendencies". Reports included the organisation of meetings, activities of travelling agitators, content of radical circulars, topics of unrest, bannings of public meetings in various Residencies, arrest of leaders, and other responses by Residents. In late 1923 there had been mentions of local dissent in the Kediri-Ngandjoek-Kertosono-Paree rectangle where there were many sugar factories, particularly HVA ones. These references involved water division, the low ground lease paid by "rich factories", efforts to set up a "Red SI", government resistance and the Native leaders' occupations and previous histories. The reports included dismissals and imprisonments but there were no references to involvement with sugar. Moreover, judging from the absence of reports sent in, the sugar industry everywhere else was also calm at the time. Occasionally, during the years of the reports, opposition had directly involved sugar factories but these cases had been explained as due to particular local issues such as ground hire or the buying up of local cane, particular individuals or an exceptional joining of several tradesmen at one factory to the "communistic" Sarekat Rajat. Infrequently, a failed strike or an unsuccessful attempt at causing local trouble were mentioned. One comfortable report had referred to an increasing "waterproofing" of the population against would-be agitating leaders, especially as soon as any contribution-payment was proposed. Another report pointed out that the Chairman of the SI in Pekalongan had previously been a laboratory worker at the East Java Research Station. By the beginning of 1926 the sugar factories' banning of communist propaganda, on the recommendation of the JSWB, had been noted. By the end of 1926 there had been second-hand reports of the "Communist Uprisings" which had started in November. By then very little was coming directly from the factories and by 1928 it appears the information service largely comprised one of the secretaries of the JSWB

collecting material from the press and other public reports, such as the government's Survey of the Native Press, then editing and circularising it. Among the activities noted in the 1928 reports were a speech by Soekarno to a Cirebon Indonesian National Party (PNI) meeting including criticism of the land-hire system, the Surabaya Indonesian Study Club's statement supporting capital grants to help the Native sugar industry, and Dutch-language press claims of the forming of a National Dutch Party or "National Concentration" as a "white front" and concurrent claims in the Chinese-Malay press of the desirability of a "yellow front" to match the "brown front" and "white front". These reports indicate both what had been happening in the wider political environment of the industry and also the rural factories' lack of active involvement.⁴⁰⁷

After the 1919-20 rise and collapse of the PFB as an industry-wide union of Native employees, industrial challenges from them and other management relations again became local, handled at the factory level by or through the Administrator.⁴⁰⁸ A succession of infrequent reports reached the central management organisation of short-lived refusals to work for a variety of factory-specific reasons; higher wages, higher piece-work pay, extra bonuses, Friday afternoon leave or reinstatement of a sacked worker. Dismissal and threats of dismissal and consequent replacement by other Native workers, was a normal management tool. Only one case was reported where European employees replaced Natives - very temporarily. During the 1925 campaign at one of the Eschauzier factories a dispute arose about re-employing a dismissed Native locomotive mechanic. Forty eight Native locomotive, train and engine-shed employees walked off the job but were quickly replaced with Europeans from surrounding Eschauzier factories. The Natives returned voluntarily the same day.⁴⁰⁹ According to Administrators' reports all disputes defined as strikes after 1920 were unsuccessful.

⁴⁰⁷ *Overzicht nopens de Inlandsche Beweging in de suikerstreken op Java*. Java Suiker Werkgevers Bond 1923-30, nos. 1-67, appearing as various communications of the JSWB to its members or its Divisional Chairmen and as IOB communications.

⁴⁰⁸ See, respectively, *De Locomotief* 1/2/1922; "PFB! PFB! PFB! 1922-1923 = 2 tahoean ...?", *Doenia-Merdeka* no 2, 1/2/1924 (only six issues were published); MVO Resident Semarang 1930: 45; *Inheemsche Vereenigingen* 1931: 14, 15, 18, 19; Poeze 1982: LXXXIV, 1983: XXXVI.

⁴⁰⁹ Tichelaar 1927b: 362.

Instances of deliberate cane burning also dropped away but continued to be a management concern, causing insurance policies to be taken out against losses.⁴¹⁰

After the 1920 defeat of the attempted industry-wide PFB, factions attempted to capture the shells of wider Native industrial organisations. These included an unsuccessful regional attempt to resurrect a PFB as part of the struggle between Marxist-Leninist and Islamists to control the Sarekat Islam (SI), the major organisation of the Native Movement, which later became the Central Islamic Union (CSI). However, judging from the lack of references in internal reports of factories, companies and the central organisations in Java and the Netherlands, these activities did not concern the management of the industry. The main PFB paper, *Boeroeh Bergerak*, reappeared very briefly after a year, as did a few issues of a rival *Soeara-Kaoem Boeroeh* from the radical faction at Poerwokerto, who were linked to the the *Sinar Hindia* communists at Semarang. Another unsuccessful attempt to revive the PFB was made through the communist Sarekat-Rajat at Poerwokerto and Klaten in 1924. They appealed "to laboratory workers, foremen or anyone who can read and write to not cut themselves off from the lowly workers, the coolies and especially the metal tradesmen who are the strong heroes and warriors of the PFB". In 1926 an attempt to organise a new union among Native workers produced the Communist-led Union of Sugar Estate Workers (*Persakaratan Orang Boeroe Onderneming Goela, POKOG*) with connections to six of the factories in the Kediri region, but this was shortlived. So too was a single small and unsuccessful attempt in 1932 by a federation of Native unions to set up a new sugar union to attract union members from outside the cities.⁴¹¹ Soerjopranoto, the founding leader of the original PFB, embodied the shift in political possibilities allowed by the colonial state. After his early attempts to organise workers in private industry, he moved away into unions and publications for Native government employees.

⁴¹⁰ Burnings were reported in each Syndicate annual report, and continued to be monitored and analysed by the Economic-Statistics branch of the JSWB (eg. Tichelaar 1924a). They, and attribution of their causes, were a routine part of factory reports.

⁴¹¹ See, respectively, *De Indische Courant* 9/6/1926; Poeze 1988: LII.

Although any prior communist activity in the industry would have had to be covert, it is noticeable that the scattering of quickly suppressed Communist rebellions of 1926-7 had not involved sugar areas. This contradicted the earlier Communist theories of their suitability. Both centres of violent uprising, Bantam at the western end of Java and the Sumatra West Coast, were not areas with European estates. This was in spite of the overseas Communist plans to start uprisings during the milling season of the sugar industry in the Soerakarta valley. There were also theoretical expectations that the best work field for the Sarekat Rajat and the Communist Party would be found in large industries such as sugar factories and other large estates.⁴¹² However, in practice there had been some connections only in one Residency, in which an uprising was forestalled. The government investigation of the 1926 situation in the Pati Residency had reported that in general the communist or similar activities in the area did not involve the three sugar factories there. He cited two exceptions that centred on two separate individuals, one recently dismissed and the other still employed at a factory, who were both sons of Native officials and of hereditary elite official (*priyayi*) status. Allegedly there were plans to wait for the signal to start the revolution then to march on several places, mostly governmental but including one of the factories. The signal had not come and those implicated were arrested. It was reported that the more educated members of the local movement had believed that the revolution would provide for a sovietisation of capitalist enterprises, including sugar factories, while the uneducated had been told of the arrival of a Russian airship with soldiers and arms, a seizure and distribution of all irrigated land and property into communal ownership, free public transport, more irrigation water, free food and drink, and stone housing for all.⁴¹³

Collective and individual management tried to anticipate and rigorously suppress communist activity, apparently almost successfully. At the end of 1925, a JSWB Communication to Members had proposed

⁴¹² Benda and McVey 1959: xix, 15; Ranneft 1926: 24.

⁴¹³ Meyer Ranneft 1926: 7, 14, 25.

the immediate dismissal of any employee who, by word, deed or writing, on or outside the estate made propaganda in favour of the communist system or for becoming a member of a communist association. Being an administrative member of a communist association or of a local division of it would be counted as making propaganda. (Verslag Algemeen Syndicaat 1915: 67)

The 1926 BENISO report included great concerns about the general situation in Java, but did not cite any widespread involvements in sugar areas.⁴¹⁴ Almost all internal management reports at this time include only rare references to related troubles with Natives. Most had referred only to the normal concerns about whether the "labour force" had been readily available and "work-willing" and if there had been any need to pay more because of some local competition for labour. However, two exceptions were noticed. In one, what was defined as a "communist campaign" was discovered at *Gending* in March 1926 and smothered by strong action by the Administrator. Five of the leaders were dismissed by the factory and a total of forty eight people were convicted by the Native court. In the other, the 1926 annual report of *Gedaren* noted a problem in getting enough casual labour from villages in one part of the factory's planting area as they were strongly Communist-inclined and had Communist agitators there with leaders under police supervision. An unsuccessful attempt to derail a cane locomotive had also occurred. The unrest appears to have continued for some while as the subsequent harvesting was started early, in spite of unripe cane, reported as being: "for various reasons partly also of political nature"⁴¹⁵

After the suppression of the attempted Communist uprisings, the government asked the sugar industry to contribute to the cost of strengthening the Field Police, a semi-military armed and mobile force under the direction of the Dutch Residents, unlike the local police forces which were directed by the Native Regents. On managements' collective behalf, the Syndicate refused, saying that the Field Police

⁴¹⁴ BENISO annual report 1925: 13 (the memorandum was dated 10/12/1925).

⁴¹⁵ *Archief* 1926: 1444 (for the *Gending* case); *Gedaren* annual report 1926: 6-7; 1927: 5.

were for general security and thus a responsibility of the government. In contrast, the Syndicate pointed out, the Plantation Police (*Cultuurpolitie*) formed for the specific purpose of guarding plantations, led and at least partly trained by officers of the ordinary police, were accepted as a plantation management responsibility and were thus entirely paid for by them. This scheme was continued until the early 1930s when the economic plight of the plantations and the reduced areas of plantations requiring guards caused reductions then scrapping of these special police in one Residency after another.⁴¹⁶

Any management-challenging activity by Native workers in the sugar industry would have been limited by the generally repressive atmosphere in which government suppressed any activity considered to threaten its authority and the security of the Dutch Possession. Management could assume government support of any steps they took to suppress any activities that posed a threat to social order among their employees. In one example Field Police were called in to suppress a 1924 protest by coolies at *Manishardjo* over claims of too little pay and too much work.⁴¹⁷ From the mid-1920s the organising of employees' unions, nationalist or non-religious associations were unsuccessful in rural areas. In part, this was because the government successfully prevented this, mainly through its Native officials.⁴¹⁸ Associated with this, the Sarekat Islam generally dropped away from union-related activity. The SI was the major pervasive Native organisation in the rural areas but had split, excluding its more radically socialist elements. The so-called "Red-SI" then lost support and was subject to more government suppression. At the 1927 congress of the purged and now-Central Sarekat Islam (CSI) the trade and workers movement was on the agenda but not discussed.⁴¹⁹

⁴¹⁶ Eg. Transfer reports (MVO) by Governors of Central Java (1933: 232) and East Java (1933: 134-6).

⁴¹⁷ *Sinar Hindia* 7/1/1924.

⁴¹⁸ According to Poeze 1988: xi; 1994: xii.

⁴¹⁹ *Verslag van het 14de congres der Partij Sarekat Islam te Pekalongan ... 28/9 - 2/10/1927.*

The defeat of the 1923 railway strike ended any wide-scale industrial challenges by workers.⁴²⁰ Responding to this strike, the state added a new legal weapon to its armoury, Penal Code (*Strafwetboek*) Artikel 161bis, and kept it there despite furious and widespread opposition. Early in the Depression years the People's Council again pressed the government to review the legislation. The provisions were claimed, probably fairly, to be so vague and undefined that effectively no strikes would be allowed. A 1930/1 Committee of Enquiry recommended some changes, but the situation remained largely unchanged. Artikel 161bis had made into a punishable offence any activity considered to be disturbing the public order, dislocating the economic life of the society or acting in a way which could be reasonably expected to do so, or bringing about or promoting others to neglect or to refuse to carry out their legally-bound work. This could be used to act against almost any significant industrial unrest by workers in any major industry.⁴²¹ Sugar industry management had not been effectively challenged by strikes or even short-lived successful union organising from that time.

The government's willingness to arrest, charge and imprison dissidents, mainly for "press offences", was kept in the political consciousness of at least those reading newspapers and the organs of associations critical of the government, by continual reports of cases. "Press offence" could legally be drawn very broadly and include promotion of contempt for the government or feelings of contempt and enmity between different groups, such as Natives and Europeans. Any political expression considered by government authorities to be attacking the Dutch rights of possession was obviously likely to be suppressed by whatever authority was needed to maintain them.

There had long been state monitoring of political activity among the Native and Chinese but this was formalised and intensified after the 1926-7 Communist revolts through the General Detective Service (*Algemeen Recherche Dienst, ARD*). Frequent

⁴²⁰ Eg. See Ingleson 1981, 1986, 2000.

⁴²¹ *De Suikerbond* 1932: 59-61.

security reports were based on surveillance by police, other officials, a variety of informants and, in some cases, the army. Also, officials' transfer reports included a compulsory political section referring to unions as well as other associations. Dense and detailed materials were sent up through the local, Regency, Residential and, from 1930, Provincial layers to the central government and collated into confidential reports.⁴²² Remarkably, union or other organised activities within the sugar industry did not appear in these reports. Moreover, although hundreds of individuals were mentioned in reports from the mid-1920s onwards, as office-holders, agitators or just involved, only exceptionally were individuals associated with sugar factories or plantations brought to attention.⁴²³

The amount and kind of cooperation between sugar management and the government in surveillance and reporting of what was considered to be potentially subversive activities can not be known. At least some cases of cooperation apparently occurred.⁴²⁴ There was some overlap between private information-gathering by the JSWB and state surveillance by the ARD but the former, relatively limited and amateur, was dying away by the time the latter was set up. The ARD appeared to have been dubious about the reliability, accuracy and usefulness of the JSWB reports, some of their claims being unsubstantial!⁴²⁵

⁴²² This claim is based on reading through all the transfer reports from the Residencies and, later, Provinces with sugar factories; Meijer Ranneft's 1926 report on Communism in Pati; the political report of the Governor of Central Java to the Governor-General in 1928; the *Inheemsche Vereenigingen* 1931 report on Native associations; Gobée's 1933 report on Indies groups and parties; separate reports on the political situation in Java and Madoera (August 1933-February 1935); and the major account of the political surveillance in the Indies in the four volume source collection and commentary by Poeze (1982, 1983, 1988, 1994). All these reports were classified as at least "Confidential", some as "Very Secret".

⁴²³ For two of these exceptions see the previous description of the forestalled Pati uprising.

⁴²⁴ Eg. The presence of copies of two "Extremely Confidential" reports on the "revolutionary direction of the PSI-movement" in Tjomal's files, one from the Resident of Djokjakarta to the Head of the Office of the Procureur-General and the Government Secretary. No 39/G.E. 10/5/1927, the other from the Resident of Pekalongan to the Governor-General 3/8/1927; references in Kanigoro's 1927 Administrator's report (p22) of exchanges of opinions with the Chief of Political Intelligence Service.

⁴²⁵ Eg. Poeze 1982: 29, 59, 77.

In summary, there is no evidence of serious organisation of political or otherwise challenging activity among Native sugar industry employees. Although no cases were reported management's response would have been strongly repressive. In 1934 the JSWB considered whether to follow the Government's 1933 policy of forbidding public servants from membership of "some native nationalist associations". However, it was decided that a general policy was not needed in the current circumstances but a guideline was sent to the regional Divisions that, if local situations appeared to warrant it, measures should be taken against ringleaders, active members or propagandists of such forbidden associations.⁴²⁶

Judging from the absence of reports, there does not appear to have been significant violence against management employees in Java, certainly as compared to Sumatra. There appears to have been a corresponding lack of violence by management employees, within a strongly expressed negative concern and policy by middle and upper management about physical or abusive mistreatment of Native workers.⁴²⁷

G. INCREASING COMBINATIONS OF UPPER MANAGEMENT

The management hierarchies between the roughly one hundred and eighty factories and their upper managements went through the latter's branches, Representatives or Delegates in Java. This combined the flow of information and decisions into far fewer channels. In 1928 sixty percent of factories were formally represented by the seven largest companies; in 1930 over ninety percent by fourteen, as shown in the following table 1. The numbers of factories these companies now formally represented were little changed from those provided with services early in the century.⁴²⁸

⁴²⁶ Syndicate Report 1933-5: 32.

⁴²⁷ See regular sections in Syndicate annual reports on 'Hardhandig optreden tegen werknemers', and the inclusion of a criterion of "relations with Native personnel" in the standard European staff conduct annual reports used by major companies (eg. in Appendix 17).

⁴²⁸ Cf. Chapter 3, section I 'Middle Management', i) Above the factories (pages 56-9).

Table 1. Representation of factories in Java⁴²⁹

Company	1928	1930/1
NHM	24	25 (7 own, 13 others')
NILM	23	25 (7, 18)
Principalities Plant.Co.	14	14 (3, 11)
HVA	12	15 (3 new)
Colonial Bank	12	12 (3, 9)
Kooy & Co.	12	11 (all others')
Internatio	11	12 (")
Tiedeman & Van Kerchem		10 (")
Anemaet & Co.		9 (+ 2) ⁴³⁰
United Klaten Plant.Co. (Yogya)/Mirandolle, Voûte & Co. (Semarang)		8 (at least 7 the group's own)
Eschauzier Co. (Modjokerto)		8 (all own)
Coster Van Voorhout & Co.		6 (all others')
Oei Tiong Ham Sugar- Factories Co.		5 (all own)

During the 1920s and early 1930s upper management's consolidation into larger combinations was clear. Although the scale of the industry was still expanding, there were fewer managerial decision-makers at the top. As well as the groups of factories with a common owning company, there were de facto groups of separate

⁴²⁹ Sources: *De Suikerbond* 22 (16) 1928: 589; *Personalia* 1930-31: 126-131.

⁴³⁰ The company itself represented 9 and its Director, Ir. J. W. Birnie, another 2 his family owned.

companies that could be operated as a single management unit through having a common Director who could sway their Boards. The pattern applied both to the Netherlands and Java-seated companies. Table 2 shows the greatest extent of this for each company or individual. Also, several other men directed one company owning two factories or two companies each owning one. There were several examples noted of integration by a common Director.⁴³¹ As in the previous chapter it is clear that there is a clear strong overall connection between direction and ownership and that the financing companies held directorial authority over many more factories than they owned directly but, also as before, the relationships involved include several complexities. These follow from the inclusion of several non-owning, non-directing local representation and management companies in the delegated middle management of many factories (table 1), the variation in the owning/directing combinations embodied by the different major financing companies, the plantation banks, and with these directing only a minority of the total number of factories (table 2).

Table 2. Numbers of factories under common Directorship by the mid to late

1920s

Directing Company/Individual	Number of factories under Direction
<i>Netherlands-seated:</i>	
NHM	15 (own or others')

In one case all the Boards of factories with the Colonial Bank as their Director agreed to join the Bank's joint pension scheme for their management employees, and later to donate to the founding of the Bandung Higher Technical Institute. In another, the internal transfers of quota and reimbursements from the 1930/1 harvest was made within the D.C. van Eibergen Santhagens-directed group of five factories in three companies, the Hoevenaar three plus *Pangka*, which had long family-ownership connections with the Hoevenaar trio, and *Sindanglaoet*. The upper management of this group of five was interrelated for many years through men such as T Van der Ben, D C van Eibergen Santhagens, and two Barons van Tuyll van Serooskerken (members of the Hoevenaar-owning family) and was connected to other companies by other Board members such as J Dólleman, on the Hoevenaar Board and Director of five other companies. (See the companies' annual reports: Jaarlijksche Verslagen van de Maatschappij tot Exploitatie der Suikerondernemingen Karang Soewoeng, Adiwerna en Djatie Barang 1915-31, and Verslag ... NV Maatschappij tot Exploitatie van de Suikerfabriek "Sindanglaoet" 1922-33/4, and the NILM).

HVA	15 (own)
Colonial Bank	15 (own or others')
NILM	8 (own or others')
Principalities Plant.Co.	4 (+ in other upper management of others)
Eschauzier/NI Sugar Co. ⁴³²	10 (own)
United Klaten Plant.Co. ⁴³³	8 (own)
D.C. Van Eibergen Santhagens ⁴³⁴	5 (+ on Boards of 5 more)
S.E. Raymondt & J. Dólleman ⁴³⁵	5 (+ latter on Boards of 5, in toto perhaps Director of up to 9)
W.F. Van Heukelom ⁴³⁶	5 (of the Java Plant.Co.)
R.H. Erdmann	4 (3 in a cluster)
A.W. Hartman ⁴³⁷	5
(Van Hoboken) De Maas Plant.Co.	4
K.J. Staverman & P.A. Uhlenbeck ⁴³⁸	3 (+ latter another 1)

⁴³² The separate companies owning the Eschauzier factories were combined into the W.G.J. and P. Eschauzier-directed NI-Suiker Unie.

⁴³³ W.A. Terwogt and, later, Ir.C.Th.F. Thurkow, both owning-family members, and Ir.A.G. Böeseken eventually directed the eight of the United Klaten Plantation Company. This company brought together the previously separate but closely related Klaten, United Lawoe, Japara and Besito Plantation Companies. They also shared representation in Java by Mirandolle Voûte & Co in Semarang and a succession of individuals in Djokjakarta. Böeseken had been an Administrator of one of the factories then Superintendent of two others.

⁴³⁴ Van Eibergen Santhagens* became the Director of two companies owning four factories then later of three owning five, and was on the Board of five more.

⁴³⁵ Raymondt, previously head of Kooy & Co in Java, and ex-Administrator Dólleman* were certainly Directors of five factories in four companies, but it appears that Dólleman could have become Director of nine and on the Boards of five more. (See Suikerkultuur-Maatschappijen op Java 1924; Dólleman's 1940 obituary, *Archief* 1940: 109-11; the clustering of factories in the various annual BENISO members' lists; company reports of the Board members of the Hoevenaar three plus *Pangka* and *Tjebongan*.)

⁴³⁶ He and his son directed the five of the Java Plantation Company (JCM) which had been set up by the NI Trade Bank (NIHB) to take over the indebted group of five. The JCM and the NIHB's daughter-company, the NILM, had at least personal links.

⁴³⁷ He was Director of five (*Gesiëkan*, *Langsee*, *Petjangan*, and the two Kendal Co factories) by the early 1930s. Hartman was also Vice-Chair of BENISO (acting Chair in 1932 with central involvement in NIVAS negotiations) and President of the Colonial Bank's Board.

⁴³⁸ They both directed one company with three factories (the Wonolongan Company with *Oembel*, *Wongolongan*, *Wringinanom*) and the former also directed another (*Tjomal*).

<i>Indies-seated:</i>	
Oei Tiong Ham Concern ⁴³⁹	5 (own)
Lie Djing Han ⁴⁴⁰	3
Djongkaré Co. (Dezentjé) ⁴⁴¹	3 (own)
Ament Co. ⁴⁴²	3 (own)

H. FAMILIES IN MANAGEMENT

Families continued to be influential in upper management, although now operating through owning-company structures rather than as personally-owning individuals. They included the Eschauzier, Dinger, Zuur, Blanckenhagen, Oei, Enger, Pijnacker Hordijk, Wieseman and Broese van Groenou, Brakel-Reiger-Horst/Haitink, Lucassen, Everard, Des Tombe, De Vogel, Vonck, and Dezentjé families.⁴⁴³ However, only relatively few family members now appeared among factory management. The Java-based Dezentjés were an obvious exception. There were also successive and other family members among the non-owners on Boards of both large and small owning companies, appointed for professional management and as representing financing interests.⁴⁴⁴

I. UPPER MANAGEMENT UNDER GOVERNMENT REGULATION

⁴³⁹ Oei Tiong Swan and Oei Tiong Hauw directed the five of this Concern.

⁴⁴⁰ This, the other "Chinese" cluster of three owned by Liem Tik Hoey and others, was directed or represented by Lie Djing Han, long-time Administrator of the largest.

⁴⁴¹ Dr. A.B.C. Dezentjé directed the Djongkaré family company with its three factories.

⁴⁴² After directing his family-owned three for many years G.A. Ament had stepped down to be a Board member with Baron R. Thoe Schwarzeberg en Hohenlandsberg becoming Director.

⁴⁴³ For more information on these see Appendix 12.

⁴⁴⁴ For some cases see Appendix 12. However, while being a non-owner member of one Board they might be also on another as an owner. Further genealogical research is needed to uncover more of the family networks that were operating.

Most upper managements accepted the need for an international agreement to restrict sugar production, but not immediately and not all of them. Furthermore, the first such agreement proved inadequate. In recognition of the looming problems in the world sugar market, managers and bankers in the Cuban industry, the world's largest exporter, had reduced the rate of new production there from 1926 to 1929. Also, in both 1927 and 1929, they had attempted to convince other exporters, including Java, to join in a world export-restriction policy. The decision-makers in the Java industry were not then interested and the Cuban plan had been dropped.⁴⁴⁵ Nevertheless, acceptance of the overproduction crisis became unavoidable and in 1931 the Chadbourne Plan was agreed to by representatives of the industries in countries, including Java, then producing about half the world's cane and beet sugar.⁴⁴⁶ All the "Java industry representatives" were Directors of the major Netherlands companies or BENISO office-holders.⁴⁴⁷ The agreement's intention was to reduce production in these countries for the next five years to the extent necessary to reduce the stores of unsold sugar until a new balance of supply and demand would be achieved.

Most BENISO members supported the Plan but the NIHB/NILM/JCM combination opposed it. Their Directors believed it would not be effective because it did not include sugar importing countries.⁴⁴⁸ In their opinion more could be gained for Java sales by continuing Java-industry-centred efforts to avoid the exporting companies and extend the operations of the VJSP to find new or increased markets rather than by accepting international reduction agreements between only some of the exporters. They deemed the Plan fatally flawed for the Java industry's interests because it accepted increased protection in consuming countries, together with the Cuban and other American-linked industries maintaining their sales to the major United States

⁴⁴⁵ Iterson 1944?: 5-6; Albert and Graves 1988a: 10.

⁴⁴⁶ The Plan was named after Thomas Chadbourne, the representative of several American banks with sugar trade interests in Cuba.

⁴⁴⁷ For the latter see H C Prinsen Geerligs, "De Chadbourne Overeenkomst", *Archief* 1931: 623-30.

⁴⁴⁸ JCM 1940: 80-3.

market, and the British-Indian and Japanese-Taiwanese industries remaining unrestricted in the Asian markets. The other major companies did not agree so the NILM first withdrew from the negotiations at the end of 1930 then left its foundation deputy leadership of the VJSP in early 1931.

Regulatory machinery for the Plan was set up within months. Because any arrangements for an agreed reduction from the 1932 harvest would have to be in place before the start of its planting in 1931, there was a sense of urgency. At the beginning of 1931, rather than try to negotiate an agreement through BENISO which could be at least delayed by NILM opposition, a formal request was sent from representatives of a majority of Java's production to the Netherlands government. They requested the Indies government to immediately set up an export license system. This was agreed and the Governor-General's Sugar Export Decree gazetted in May 1931. The Director of Agriculture, Industry and Trade was empowered by the Governor-General to set the quotas, advised by a Committee of Advice of company representatives, including a representative from the Oei Tiong Ham company. The licensing bureau was set up in May 1931, headed by P.E. Staverman who accordingly resigned as the Colonial Bank's Head Agent. Another, smaller, advisory committee was set up of representatives of the sugar exporters Wellenstein & Krause, Erdmann & Sielcken, Patel, and the Oei Tiong Ham trading arm Kian Gwan.⁴⁴⁹

As its own statutes did not allow it to be involved in sugar trading, BENISO set up a voluntary organisation paralleling its own to advise the government and work within this voluntary system. This Association of Java Sugar Companies for setting International Contract Export Quotas (*Vereeniging van Javasuikerondernemers ter Quoterijng der Uitvoren bij Internationaal Contract, VISOCO*) was to annually set the maximum exportable production of each member factory. Its members agreed that they would all be bound by its decisions so that a rational restoration of planting/production in relation to the Chadbourne Agreement could be achieved on an equitable basis.

⁴⁴⁹ *Archief* 1931: 342, 569-78, 641-3, 685, 795; Syndicate Report 1931-3: 5, 22-3.

"Equitable" was accepted as meaning all of these maximum allowances would be calculated as a proportion of previous normal shares of the total Java production.

The NILM, with its eight factories, and the associated JCM, with five, refused to be involved in this or any other discussions about a new system. Therefore, the five factories of the companies directed by Van Eibergen Santhagens, which had been managed in Java by the NILM with their consignment contracts with its mother-company the NIHB, were transferred in 1932 to the Java management of Kooy & Co and financing by the NHM.⁴⁵⁰ The NILM and its mother NIHB continued their campaign against what they considered to be the Java industry submerging its own best interests in the Chadbourne Plan. In 1932 their Directorates produced a remarkable strategic plan for a cooperative management of the entire Java industry. They proposed that a new, all-inclusive company, the "United Possession" (*Vereenigde Bezit*) be established, under either the Dutch or Indies law for cooperatives. Individual companies would be practically powerless in this combination of the whole industry under the supervision, and with the cooperation, of the government. An independent management board would control the allocation of planting and production across all factories and arrange the sugar's sale into the market. Only those factories needed for this would be kept in operation, some would be closed down completely and others kept available with care and maintenance by a cross-industry workforce. Owners not wanting to join in the scheme would be paid compensation, their holdings taken over and liquidated. Operating accounting would be on an industry-wide basis with a general profit and loss account. The Government would be involved in the management and also, as the sugar industry was of such importance to the general interests of Java, in paying for any collective operating debt if it was more than the fixed amount of f.150 per hectare. The Government would also be involved in negotiating with other governments about import restrictions. The seventy-four page proposal was submitted to the Minister of Colonies in the Netherlands and to the

⁴⁵⁰ See Hoevenaar company annual report 1932.

Governor-General in the Indies.⁴⁵¹ It was not accepted by any other companies or either government.

The Chadbourne Plan proved only partly successful. Since its 1919 foundation the VJSP system of exporters buying from a producer-controlled near-monopoly seller had continued to be accepted by companies controlling about ninety percent of Java's sugar exports. This had appeared more effective than its short-lived predecessor, the JSV, which had included only about sixty per cent.⁴⁵² However, the VJSP's support proved vulnerable to the severe drop in the prices it obtained through its near-monopoly sales. In late 1931 VISOCO's estimates of the likely sales, production and stock-pile for the next two years indicated that the Chadbourne Plan reductions were grossly inadequate.⁴⁵³ The stockpile of sugar was not going to be reduced as rapidly as the government had agreed, if at all.⁴⁵⁴ These predictions were challenged but pessimism mounted. There was obviously now a massive overproduction that would have to be stored as sales volumes and prices were disappearing for the foreseeable future. Private arrangements outside the VJSP, competition in selling into the previously largely ignored local market and more prominent irritation with the small minority of "free loaders" or "free riders" staying outside the VJSP were added to the disputes about extending its market role.⁴⁵⁵ The non-joiners were mainly factories with financing from sugar traders, such as Fraser Eaton and the Oei Tiong Ham company. As a further irritant, the tactics of the latter continued to disturb the collective majority. In early 1934 it was reported to have shown its 1932 planting plans to the government which declared it "had no concerns" about them. The company then claimed that this approval had not involved "at the risk of the owner" and so placed at least a moral obligation on the government to allow it a 1933 sales quota to cover the production

⁴⁵¹ NIHB/NILM 1932.

⁴⁵² Syndicate Report 1929: 42.

⁴⁵³ BENISO 1932: 10

⁴⁵⁴ Literally piled. An article (*Archief* 1934: 1-9) described how sacks had been successfully stacked 48 high in 1932, over twice as many as the previous maximum.

⁴⁵⁵ Notulen van de bestuurvergaderingen van de BENISO. 8/1/34

from this planting without having to go through the central sales organisation NIVAS (see below).

A committee was set up to consider possible modifications to the VJSP but this was not successful and, with more companies intending to drop out and sell individually, it became clear that the voluntary system established in 1919 was about to collapse.⁴⁵⁶ The VJSP's previous acceptance disintegrated as members withdrew their support and foreshadowed they would not renew its mandate when it came up for renewal at the end of 1932.

In August 1932 the BENISO Chairman came to Java to try to negotiate a solution. The negotiations included the Government and industry interests in Java and (by letter, circulars, telegram and telephone) the Netherlands. They eventually agreed that only a form of sectoral corporatism with a government-enforced monopoly would adequately solve increasing "all against all" chaos.⁴⁵⁷ Eventually the Government followed the opinion of the roughly three-quarters majority that the "BENISO-plan", with a compulsory single-seller and an equal-reduction, would be for the greater general benefit. The Government's plan was accepted by the Council of the Indies and the Minister of Colonies but rebuffed by the People's Council which passed proposals for significant amendments, mainly reducing government powers. After discussions between the Indies Government and the Ministry of Colonies some minor modifications were made. The Netherlands-Indies Association for Sugar Sales (*Nederlandsch-Indische Vereeniging voor den Afzet van Suiker, NIVAS*) was established by Government decree of its statutes and regulations at the end of 1932. It operated similarly to the VJSP it was replacing, but was compulsory and under a Government-appointed directorate rather than being purely an industry organisation. As well as management and executive committees made up mainly from company

⁴⁵⁶ JCM 1940: 78-83.

⁴⁵⁷ *Secretaire* 1932/3, *Tergast* 1932/3. For later cases of sectoral corporatism in the Netherlands, the Agricultural Crisis Centres (for agricultural production, processing and subsidising during the Depression) then the 1936 preparatory Key Centres and 1939 State Offices (with the different role of emergency controlling of food and other raw materials in preparation for war), see Barnouw D and Nekkens J 1991, esp. 138-142.

representatives, it had a two-member Commissariat with rights of access to all information and final decision-making powers⁴⁵⁸

The compulsory NIVAS had as its statutory aims: (a) caring for the interests of her members in whatever concerns the sale of cane-sugar produced in the Netherlands-Indies; (b) informing the Government concerning the possibilities of sales of the sugar produced in Java each year and the possible presence of stores from previous years, so that it can fix the annual production ... as well as informing her members to establish the area to be planted with cane each year." (Article 2). Its members were owners or operators of one or more sugar factories in the Netherlands-Indies (Art 4 [2]). Its management committee was made up of a Chairman, the Java Bank and at least fifteen members elected by and from the NIVAS members (Art 5) with an executive committee of the Chairman, Java Bank and up to six of the management committee members (Art 7). The original executive was the NHM, HVA, NILM, Colonial Bank, the Principalities and the Gondang Lipoero Plantation Companies, with a Chairman appointed by the Governor-General, Vice-Chair the NHM and A.H. Kloppenburg, 's-Gravenhague, as the Director of the Sales Office in the Netherlands (Art 22). The Government had a two member Commissariaat who had entry to all meetings and deliberations and access to all information with absolute powers delegated from the Governor-General to refuse or forbid transactions not previously agreed to (Art 9).

By providing the information and control needed to try to match production at overall and individual factory level to predicted sales, NIVAS was an essential component of the machinery by which the Government regulated Java sugar production. From now on the maximum sales, production and thus planted area of sugar estates was out of the hands of private managers. What the Indies Government

⁴⁵⁸ See *Statuten van de "Nederlandsch-Indische Vereeniging voor den Afzet van Suiker (NIVAS)" gevestigd te Soerabaja*. 1932 (31/12/32, modified 29/3/1935, 22/2/1936, 28/3/1936 and 20/3/1941), and its corresponding *Huishoudelijk Reglement*; or the reprinting of the 1932 version in *Archief* 1933: 1-13, 38ff. The duties of the Government Commissioners were also publicised in *Instructies* 1932/3.

had nearly succeeded in introducing in 1917 came into operation sixteen years later. In the words of Boeke:

In the most recent phase of economic development, that of consolidation and restriction, there has been a turning point, soon after the crisis of 1931, when the centre of gravity of western industrial life came to be partially transferred again to Indonesia - this time, however, to the Netherlands Indian Government offices in close cooperation with the Colonial Department in the Netherlands. In the writer's opinion, it is symptomatic that the purely private organization of the United Java Sugar Producers ... which dates from 1918 and had its seat in the Netherlands, was in 1932 replaced by the NIVAS, the Netherlands Indian Association for the Sale of Sugar, established by ordinance, located in Indonesia and working under Government patronage. (Boeke 1953: 227-8)

The worsening sales situation made the differences in interests between upper managements and between management and government more public. The managements clearly recognised the Indies government was prepared to exercise final control.⁴⁵⁹ In 1932 it was expected the government wanted a 1932 planting/1933 production reduction of about a half. VISOCO members agreed among themselves they would propose such an amount, thereby forestalling any compulsory government impositions. The HVA had been reported to be wanting a lesser common reduction of forty two per cent although it would accept forty five but "at the 11th hour", after reconsidering the predicted sales difficulties, accepted the fifty per cent at the crucial VISOCO meeting. Several other small companies which had also declared lesser reductions then followed its lead. A subsequent BENISO members' meeting tried to

⁴⁵⁹ The following section is derived from material in ARA 2.20.01 NHMnvr Nr. 8846: NHM Second Division Cultivation Affairs/Sugar, Amsterdam, to NHMBatavia Factory, Confidential No 629, and No 636, 3/2/1932; NHM Amsterdam to NHMBatavia, Confidential No 788, 18/1/1933; Amsterdam to Batavia, Confidential No 791, 24/1/1933; Amsterdam to Batavia, Confidential No 799, 8/2/1933; Confidential No 156, 23/3/1933 (Batavia to Amsterdam); Confidential No 169, 31/3/1933 (Batavia to Amsterdam); Confidential No 217, 25/7/1933 (Batavia to Amsterdam).

get non-VISOCO companies to join the agreement, as well as to push the reduction further. These goals was not reached as some companies did not want a binding declaration and some others had not yet decided which level would be least financially unfavourable to them. Nevertheless, enough individual or group members had decided to restrict to exceed the minimum target of a half.⁴⁶⁰ Ahead of the government directly enforcing restrictions, the upper managements had succeeded in reaching a collective proposal which would be acceptable to the Indies government.

The corresponding process in 1933 was more difficult because the government was more demanding. The market forecasts were so pessimistic that, in general, managements' position had reversed, most now wanted to minimise or stop planting. Planting plan negotiations were revealing about the management's weakened position relative to the government. By 1933 NIVAS was operating and it was even more obvious that managements would have to produce planting plans that were acceptable to government. The government was known to want some planting and processing for the benefit of the local populations and its own revenue. It was now normal for senior officials in sugar areas to refer in their transfer reports to the local and regional distress being caused by the reducing or ceasing activities of sugar plantations and factories.

Negotiations of 1933 plantings can be divided into three stages - none involving factory managements. Confidential internal NHM communications between Amsterdam and Jakarta document the split between the majority of companies wanting to plant none or only a little if forced by the government and those who wanted to plant larger amounts. The problem was initially misleadingly exaggerated by the Director of the Java Plantation Company (JCM), W.F. van Heukelom, declaring at a BENISO Management meeting that not only were his five factories going to plant about half normal but also he knew, being on their Boards, that the eight factories of the NILM and those five directed by Van Eibergen Santhagens had similar plans. This position was attacked as disappointing and parasitic, with these companies "wanting to

⁴⁶⁰ A handwritten note of the twenty four attending members' preferred reductions showed most were of at least fifty per cent.

pluck the fruits of a future improvement without taking their share in the necessary suffering". Nevertheless, as they were not members of VISOCO, they had that right. BENISO then tried to isolate the dissenters and reinforce VISOCO solidarity by using authorities to impress on VISOCO members both the injustice of these non-members increasing their production at the expense of the members and also how difficult it would be to sell these large amounts of sugar. There were concerns that the Indies government could use the intended major plantings by non-members in the predicted arguments about non-planting by members.

However, soon after this first stage it was discovered that the NILM was actually planning drastic reductions and, after discussion and pressure from the NHM, Van Eibergen Santhagens decided on an almost complete cessation: not quite complete, "for reasons of prestige". NHM management in Amsterdam used technical financial arguments to dissuade one of its related companies from planting then wrote to the majority of these companies insisting they not plant in 1933. Two years later, in another example of the NHM's discretionary financial power, Van Eibergen Santhagen, as *Sindanglaoet* Director, finally decided to not plant in 1935 because the NHM refused to advance the necessary credit.⁴⁶¹ However, in 1933 the NHM did not use this approach with the financially more independent Eschauzier company or the group of companies directed by the influential A.W. Hartman.⁴⁶² Apparently there were limits even to the hierarchical discretionary financing power that the NHM exercised. The NHM's Jakarta office was then advised that BENISO agreed to propose no planting at all then, under government negotiation, to accept ten to fifteen per cent of normal.

The third and final stage of negotiations was in the Indies where the government had now indicated that it would be satisfied with about a fifth of normal planting. Company managements, as had been planned earlier, gradually but complainingly acceded to this demand. For example, the NHM planned an initial

⁴⁶¹ *Sindanglaoet* annual report 1933/4: 6.

⁴⁶² He was also a Vice-Chairman of BENISO and of VISOCO, on the Colonial Bank's Board, later its President, and had been one of the central negotiators in the operations of the Chadbourne Plan then the founding of NIVAS.

statement of no planting then progressive, protesting proposals of one, two and three factories, thereby reaching a fifth of normal. It also intended to argue that it should not be forced to incur further losses on its own factories and those in which it had investments because others, particularly the individual independent factories, refused to plant partially. Tensions rose between managements and government over the latter's intentions to maintain some operations in areas which would otherwise be particularly hard-hit. There were discussions between company representatives and government officials. Nevertheless, the important discussions were apparently held mainly within the government - including Inland Affairs, Agricultural Affairs, NIVAS adviser, and the Governors of the East and Central Java Provinces which included the Residencies with sugar areas. The government decided to enforce its wishes by a system of "extra-planting licences". In effect, these were transfers of quotas within regions to preferred factories at the expense of the total allocated to the others in that region. Specific amounts and favoured factories were indicated for each sugar Residency.⁴⁶³ As each additional quota was likely to involve operating a factory at an undesired additional loss, the government threatened that if no factory in a region accepted the transfer the export licences for all of them would be taken away. Managements grudgingly accepted the government's demands. For example, the NHM's general preference was to not plant at any of its own or related factories but senior officials for Agricultural Affairs "strongly advised" that it should drop its objection. It accepted some planting at one factory. For financial reasons a couple of its related companies also planted. Consequent instructions were then sent down through the hierarchy of management above the factories, for example from NHM Amsterdam office to NHM Batavia (Jakarta) Factory to NHM Surabaya office to instruct the Java management company Tiedeman and Van Kerchem not to extend ground leases for two of the three Etty family-owned Wonolongan Cultivation Company factories.

⁴⁶³ Eg. ARA NHM archive [VISOCO dossiers] Inv. Nr. 8846. Correspondence NHM Batavia to Amsterdam. ConfidentialNr. 156, 23/2/1933

By just after mid-1933 the pessimistic situation for the next production and sales year was becoming clear and management concerns deepened. NIVAS export sales estimates, which some considered too optimistic, indicated that, even with the existing and imminent greater restrictions, the carried-over stockpile would not be eliminated in the next few years unless there was no production at all in at least one year. It was believed that government officials thought that the entire stockpile would have to be eliminated before there was a chance of improvement. However, irrespective of any management preference, government could not countenance a complete ban on production for one or more harvests as this would cause too much harm to local populations. Management appeared to assume that the government's first priority was the interests of the local population rather than the finances of the sugar industry. This continued. Within BENISO meetings there was uncertainty about how NIVAS decided on its maximum permitted production; "possibly on assumptions of least loss-making prices although more could probably be sold but at lower prices". Several members pointed out that the government did not have to accept NIVAS proposals and in fact had already set a higher limit for 1936, in part for the benefit of local Native populations, and was expected to do so again for 1937.⁴⁶⁴

Moreover, as well as forcing the industry to plant more than it wanted to, the government bolstered its own revenue in two other ways at the expense of the now unprofitable sugar industry. In 1933 it exercised the possibility it had written in to the NIVAS-enabling legislation by demanding a large annual donation from NIVAS proceeds for a "sugar crisis fund" to assist the unemployed. In 1934 and 1935 it imposed a duty on sugar exports. Industry management objected to paying for unemployment assistance, denying any continuing obligations, but the government set up a committee chaired by the Head of the Labour Office and including the Syndicate and Sugar Union Chairmen and a Native official of the Labour Inspectorate. In February 1933 this committee's report advocated a separate fund but, after further

⁴⁶⁴ Minutes of BENISO Management Committee meeting 19/12/1935.

negotiation, this was changed to NIVAS paying f.500,000 for three years as the industry's full obligation. In the scheme's second year, given the further deterioration of the sales market, management pressed for a reduction and the amount was halved for the third year, although the Syndicate made a once-off ten per cent additional voluntary payment. Although the industry succeeded in reducing its payment, it was still clear that the Government was exercising the final decision-making power.⁴⁶⁵

Managements could not solve their problems from their own resources. The massively reduced production in Java shrank the stockpile until it disappeared in 1937 but in other ways the Chadbourne Plan was less successful than hoped. The original quotas had been set too high, too many producers were not included and some of these increased production while the free market continued to shrink and its prices to fall.⁴⁶⁶ The export situation of Java sugar in consumption and refining markets continued to deteriorate because of increased preference and protection elsewhere. USA protected Cuba, Puerto Rico and Hawaii. Britain assisted Canada by an Imperial Preference system, subsidised new production facilities in Britain itself, and protected the British-Indian industry. The Taiwanese industry was protected in its markets in Japan and China by its Japanese colonial occupiers and the Philippines industry had special access to the market of its occupying United States. Management in the Java industry was powerless to influence these international developments.

Moreover the process of setting production shares demonstrated managements' collective inability to resist government wishes and their individual inability to exercise dominance among their peers. The Chairman of BENISO lamented that the unity of the sugar companies was disintegrating with individual and groups of companies approaching the Government with their own special pleadings.⁴⁶⁷ However, even the largest companies were not in any dominating position in the industry. As previously

⁴⁶⁵ Syndicate Report 1933-5: 33; BENISO Management Committee meeting 28/11/1935. Also see Jaarverslag 1935.

⁴⁶⁶ Eg. See Sugar Statistics 1932/3; Prinsen Geerligs 1931; Iterson 1944?: 6; Boomgard 1988: 161-2.

⁴⁶⁷ BENISO 1934: 8.

mentioned, there were limits to the influence that could be exercised even by the NHM through its discretionary financing of related companies. In another example, the NHM could not buy up any of the production quota in areas it wanted even though the little *Kadipaten* company had done so. This one-factory company had bought up quotas which the Ament company had returned to the government from its cluster of non-planting factories. In contrast, the other companies with factories in the areas the NHM was interested in had factories elsewhere to which they had preferred to transfer any relevant non-used quotas, rather than sell them to the NHM.

By the mid-1930s the system of regulation needed review and renewal, with management recognising its weakening position. The original 1931 regulations had been governing the industry for five years, although the government had slowly tightened its control with modifications. These provided, inter alia, for a non-operating factory with little stored sugar to have its operating licence removed, thereby giving the government the legal authority to force its owners to operate it again or close it permanently. By 1934 there were internal discussions in and out of the government about what replacement regulations would be needed in early 1936. There were arguments about most topics within BENISO but members doubted their possible influence on the government's deliberations, and did not know whether the government would seek industry advice or would act on its own. BENISO members believed that the time taken for discussions about rubber restrictions had angered the government making it prepared to go in and act. Also, that people in the Indies convinced they knew better than the industry enjoyed great influence. It was considered that the previous Chadbourne Agreement and NIVAS measures largely followed the industry's designs, but these had come from situations where the industry had a united front. If the industry could not agree on the various continuing issues of difference, the government would certainly come in and impose potentially unacceptable conditions. However, such a variety of different opinions, interpretations and priorities remained that the Management Committee of BENISO could find no clear majority for any one

plan to take to its general membership or to the government. The Committee postponed further debate.⁴⁶⁸

The changes made were driven by the government. General guidelines of the government's intentions to rationalise and concentrate the sugar industry were delivered by the Director of Economic Affairs⁴⁶⁹ in a speech to the People's Council in February 1935. A central committee, mainly of government officials, with a larger external response group of industry management representatives, was set up to make detailed recommendations. The management representatives were nineteen European men and one European woman. The full report included the central committee's deliberations and the opinions expressed by the external members in response to queries.⁴⁷⁰ It reported late that year, with its proposals adopted nearly unchanged in the government's subsequent Sugar Regulations, gazetted in January 1936.⁴⁷¹ The Regulations were designed to compel the industry to reduce and restructure itself over the next three years. They formed the regulatory framework of the planting and processing of the industry from the 1936 until 1942 when the Japanese arrived.

The crucial tool was the government's allocation of production shares in a total which was calculated annually on predicted export sales, with these shares transferable for one harvest or permanently. As well as cutting production by about half of the previous maximum, the regulations were intended to be even-handed across the interests in the industry. Thus initial production shares were allocated arithmetically based on previous production rather than on economic cost-effectiveness; companies'

⁴⁶⁸ BENISO Management meeting 8/1/1934.

⁴⁶⁹ Previously Agriculture, Industry and Trade.

⁴⁷⁰ Mrs (Mevr.) L C Dinger - listed, in 1925, as the Administrator of one of the two Dinger-family's factories and, in 1935, as a Board Member both for its owning company and that of the Dinger's other factory (both established in Malang and directed by O N J C Dinger, the Administrator of the second factory).

⁴⁷¹ See Suiker-Regelingen 1936, written in Java and printed in Den Haag. There were several interrelated regulations: the Sugar Transition Regulation 1937-9 and Sugar Consolidation Regulation 1940, (extending and modifying the previous Sugar-related Ordinance), Sugar Export Ordinance 1936, Sugar Import Ordinance 1936, Sugar Transition Decree 1936 and Sugar Annual Production Decree 1937 (BENISO 1935: 9). Also see Boeke 1946: 39-47 for a subsequent commendation of the new system.

financial strengths were not considered, production shares were allocated to owners not to individual factories and the two dozen "independent" factories which were not part of a group with the same owner were given an extra quota to compensate for their inability to transfer production-share between factories within the group. Other assistance was available to allow the continuation of individual factories in areas where their extinction would have calamitous and irreplaceable economic effects on the local population.

The government decided its role would be to compel the reduction and impose a regulatory framework in which this would be done systematically and evenly but, apart from requiring complete access to operating and sales information, archives, administration and book-keeping, to go no further. Decisions about which factories to keep in operation, which to maintain in reserve for possible future production increase, and which to close down completely were left to the owners. It was considered these decisions, as with operating ones such as about how much cane to plant and process to achieve the fixed production share maximum, would be most appropriately, rationally and expertly made, and the consequent risks taken, by the companies' managements.

There was little or no change in the 1931 Regulations' prescriptions of the method of calculating factories' "normal production" and NIVAS was retained as the compulsory single-seller into the export market. The production formula was based mainly on the highest planting in one of the years from 1928-1931 and the average production per hectare in 1929-30.⁴⁷² The total divisible quota of about one and a half to one and three quarter million metric tons was reduced by seventy five thousand tons for the government to allocate between the "independent factories" and fifteen thousand among those it decided were vitally important locally.⁴⁷³

The near disappearance of the stockpile and the longer term security of production quotas for at least some years from 1937 provided for an increase in

⁴⁷² The "highest planting" measure was a modification of the original recommendation which had been the average of 1929-31, made after suggestions from the management response committee.

⁴⁷³ JCM 1940: 82.

planting in 1936. Managements could plan ahead with more clarity and certainty. Management plans had to cover several years. It was common for factory reports to include arrangements being made for ground leasing up to five years ahead and accounts included incoming payments from the previous couple of years. At the HVA's 1927 AGM, the ex-Director of Agriculture in the Indies, Sibinga Mulder, had asked if the continuing expensive expansions were in the best interests of shareholders. He was told that this was necessary when companies needed to plan ten years ahead.⁴⁷⁴

The industry's technical imperatives had been changed. Before 1930, they had been how to produce as much as possible as profitably as possible from a set maximum plantable area. Henceforward, they became how to produce a particular prescribed maximum amount as profitably as possible. On this basis, management could choose whether or not to keep factories and leasing rights. Operating factories increased their planting, some factories on a care and maintenance regime put in new seedlings and others finally sold their continuing production shares and equipment. Factory management employees were hired or, because government regulation dictated that employers of Europeans had to give first preference to previous employees still in Java, then to previous employees who had gone to the Netherlands but wished to return, most were rehired. Significantly, in terms of ethnic politics in the Indies, this government decree preferring re-employment embodied the "de Hoog-motion" proposed by de Hoog, the leader of the "European stayers" party, the Indo-European Union in the People's Council debate on the 1936 Sugar Regulations. Employers had to report quarterly to the Labour Office on expected vacancies and where their new employees had come from.⁴⁷⁵

The restrained optimism inherent in the 1936 regulations was cemented by the success of international trade negotiations in 1937. During the 1930s there had been

⁴⁷⁴ *De Suikerbond* 1928: 588). Sibinga Mulder was attending as a share-holder, one of the only 16 there.

⁴⁷⁵ In 1937, 496 of the 653 European employees taken on were re-employed ex-sugar-employees, including 476 currently in the Indies. Of the 157 employed for the first time, 131 were also already in the Indies (Syndicate Report 1937: 16). Thus only 26 new employees came directly from Europe.

international considerations about the world sugar market within the continuing wider discussions on the world economy, but nothing effective was done until the British government's London conference in April 1937. This involved governments of all relevant countries apart from Italy and Japan and produced the London Convention of May 1937, which promised several years of stabilisation of the international market. The consequent inter-governmental International Sugar Council was more inclusive than the previous Chadbourne Plan. It set export quotas for twelve countries: Netherlands, including colonies; Cuba; Santo Domingo, Czechoslovakia; Peru; Soviet Union; Poland; Haiti; Portugal, including colonies; Germany; Hungary; Brazil. The amounts the British West Indian colonies, Australia and South Africa could export into Britain's preferential market and the amounts Britain's own domestic industry could produce were also prescribed.⁴⁷⁶ The signatory governments committed themselves to ensure that the sugar industries under their jurisdiction, including in their colonies, neither exceeded the export quota allocated to them nor to have stored more than an agreed amount. The country quotas, as with the 1936 Indies regulations, were based on predictions of a world export market about half of what it had been at the beginning of the 1930s. Java's total production quota was set at about one million four hundred thousand tons, but of this about three hundred thousand was for internal consumption and eighty thousand for export to the Netherlands. This colonized-coloniser trade not being counted as "international export" left about one million for the open world market, which was now only about a quarter of all sugar exported in the world. This quota was under half the 1930 Java production of about three million tons. For the first time ever the Dutch government had promised some assistance by importing Java sugar for refining, the refinery paying below cost-price but NIVAS being government-subsidised to receive world parity price. This assistance was given against a variety of objections from Dutch beet sugar interests.⁴⁷⁷ Later in 1937 the Dutch Government

⁴⁷⁶ Syndicate 1938: 24.

⁴⁷⁷ Taselaar 1998: 444-5; *Indische Courant* 2/1/1934; BENISO 1936: 8; Syndicate 1937: 21-1; 1938: 21-2).

legislated its commitment - to operate from early 1938. In 1938 the government decreed the sugar industry's maximum production for 1939 and 1940, thus its planting for that year and the next - and finally for 1941 and 1942.⁴⁷⁸

By this time the state had clearly taken over basic control of the industry from management. As *Gending's* Director, the Colonial Bank, declared in its 1938 jubilee history: "Over the last 50 years our business had changed from wholly free to one wholly regimented by the Government, not free to fix our own production, nor to sell its own product".⁴⁷⁹ As a further step, in 1938 the Indies government set up the Hardeman-Committee to review the industry's basic Factory and Ground-Lease ordinances which regulating the setting up and operating of factories and the leasing of land. This Committee had eight members, a Chair and a secretary. Almost all were government officials, including three from agriculturally related departments, two Residents, two Native Regents and the government member on NIVAS. The Chairman of the Syndicate, Mr. O. Van Rees, was the only member from the industry's management.⁴⁸⁰

J. EQUIVALENT EFFECTS ON INDIVIDUAL COMPANIES

The regulations intentionally provided for a forced equality over an open competition. During the first half of the 1930s there was an increasing wave of factory closures, temporary or permanent, as a consequence of the financial calculations of their upper managements and financiers. About half never reopened. A remarkable feature of this was the relative evenness as was intended across the companies. Overall, the different forms of upper management did not appear to advantage or disadvantage survival.

⁴⁷⁸ Syndicate Report 1938: 21.

⁴⁷⁹ *Gending* 1938: 31.

⁴⁸⁰ Syndicate Report 1938: 20.

Both the voluntary VISOCO and the subsequent compulsory regulatory production restrictions had been based on assumptions of proportionally equal reductions. The 1931 export licensing and the 1936 production share allocation effectively provided for transfer of shares between the management of different companies, the internal transfers between its factories by management of a company owning two or more, and the eligibility for a minor additional share to single "independent" factories.

The ideal of proportionality became an actuality. As part of the financial reorganisations, debt-reductions, writings-off, liquidations and optimistic further investments, the major financing companies brokered the taking over and re-allocation of production shares both among the factories in financial relation to them and also between these and their own factories. The NHM took in quotas from five which never milled again and gave out to seven. The Principalities Plantation Co took in quotas from four, with each of their respective owning companies being liquidated, and gave out to the companies owning four. The NILM transferred some of its allocation to the companies owning fourteen, taking in from only the closed one previously owned by Han Hoo Tong. Overall, management decisions produced proportionally similar reductions in factory numbers across companies.⁴⁸¹

As a result, about half the factory management staff "on the ground" a few years earlier were no longer in the industry and the important decisions had been made in the levels of management above them.

It is noticeable that most of the families owning factories in the 1880s were still owners, through company shares, in the late 1930s. Although they usually owned fewer. They included the Ament, Broese van Groenou, Dezentjé, Eilbracht, Enger, Eschauzier, Ety, Gonsalves, Han, Van Hemert, Hoevenaar, Van Lawick, Levert,

⁴⁸¹ Details of this are given in Appendix 13.

Loth, Lucassen, Pijnacker Hordijk, Van Rijk, Teding van Berkhout, The, de Vogel, Wieseman, Van Wijck, and Zuur families⁴⁸²

However, there was a diminishing of Chinese upper management in the Java industry. The majority of the small proportion of surviving Chinese-owned factories were closed during the early 1930s. A few years before this the very small *Nieuw Losari/Panggang*, Chinese-owned and administered, was closed and absorbed into the large *Nieuw Tersana* by the NHM. Before its last milling in 1933, the small *Ardjosarie*, which had been owned and administered by the Tan family, was being represented by O.N.J.C. Dinger, Director of the Dinger family-company which owned two other factories. *Baron*, *Djoewono* and *Koedjomanis*, the three factories in the Brebek area of Kediri owned by Liem Tik Koey and Lie Djing Ham and administered by them or other family members, were all closed in 1931 or 1932. This trio were known to have been "in serious discomfiture" for several years and claimed to be unable to pay full compensation for non-occupied land. Smaller land-owners accepted the early small offers but some of the larger ones took local, then Provincial, court action which decided in their favour even though there was no money available to pay them. These land-owners were given the right to use their land themselves until they were paid.⁴⁸³ By 1932 the small *Djatipiring*, owned and administered by the Kwee family, had been taken over and absorbed by its neighbour, the Hoevenaar family-owned *Karangsoewoeng*. The small *Pengkol/De Goede Hoop*, owned and administered by the Han Tiau King Brothers, was closed permanently in 1933. *Kebon-Agoeng*, owned by Tan Twjan Bie, the "Sugar King" of Soerabaja, had Chinese Administrators for over a decade before a European, A. Franken Lzn., was appointed. Its ownership was then put into a locally-established company and its representation turned over to Tiedeman &

⁴⁸² Among the few changes of ownership, the relatively small *Boedoean*, closed since 1932 and still owned by one or more members of the Etty family, was bought in 1936 by the Lucassens' companies, which owned *Doekoewringin* and *Kemanglen*, and its production quota split between them. (ARA 2.20.01 NHM, [Doekoewringin] Inv.Nr. 11567, Overdracht van preferente aandelen.) Also, since about the turn of the century the Gonsalves had retained only a minority share in the mainly NHM-owned (now *Nieuw*) *Tersana*.

⁴⁸³ MVO Res. Kediri 1934: 22-3.

Van Kerchem. The company owning the relatively small *Porrong* and *Tjandie*, earlier directed by The Toan Ing then by Han Kong Gie who had been an Administrator of the former, first reduced planting then stopped both these European-administered factories after their 1933 milling, reopening just the latter which then operated on a smaller scale in spite of combining both production quotas. As described above, three of the five Oei Tiong Ham-owned, largely European-operated, factories were closed.

Two other previously local Chinese-owned factories had become Japanese-owned. *Soekoredjo* and *Soemengko* had been bought by Japanese companies before 1920.⁴⁸⁴ The small to average sized *Soekoredjo* had been bought by the Tokyo company Nankoku Sangyo Kemishiki Kaisha which appointed a local Japanese Director, initially S. Ukai, in Surabaya. The factory itself was managed by European factory staff, although there had been a report that, after it was bought in 1917, there had been a short attempt to run it under Japanese administration before reverting to European.⁴⁸⁵ By the end of the 1920s *Soekoredjo* had come into the hands of the NHM. It milled for the last time, and from only half its planting entitlement, in 1932. The small *Soemengko* had been bought in 1918 by the Netherlands Indian and Agricultural Company Ltd, and by 1920 was represented in Java by its Japanese Administrator, first Y. Matsumoto then F. Shimokawa. It had been closed in 1928 with its planting concession divided between its neighbours, two Eschauzier and one NHM factory.

A third factory, the small *Gedaren*, earlier *Kradjan Redjo*, had been bought by Japanese from European owners. Its new owner was the Tokyo-based Japan Sugar Refining Company (*Dai Nippon Seito Kabushiki Kaisha*), a major refining and trading company that had been established in Java for many years. *Gedaren's* new company had Japanese Board Members and until 1945 its Directorate was the NV Straits und

⁴⁸⁴ *Nota van het Dagelijksch Bestuur van het Algemeen Syndicaat van Suikerfabrikanten in Ned-Indië over het Ontwerp Suikerordonnantie 1920 aan de Directeur van Financien te Batavia*: 30.

⁴⁸⁵ *Jaarverslag der Vereenigde Javasuiker Producenten van de oprichting af te ulto 1919*: 8.

Sunda Syndicaat Administratiekantoor in Jakarta, itself directed in the 1920s by E. Helfferich. *Gedaren* accepted and exported through the VJSP.⁴⁸⁶

K. FACTORY MANAGEMENT UNDER REGULATION

The government's basic concern about relations between Native land-owners and non-Native land-renters was maintained. Most involvement by government officials in factory management issues was based in land lease issues or in irrigation planning. The former included planting concessions, contracts, minimum rent setting, extended fallow-lease use, breaking or other changes in leasing contracts. The latter included negotiations about factory funding of new works where these were a condition of approval of expansion requests. From 1899 the first Ground-lease Ordinance had provided for fixing maximum plantable areas which could be leased for short periods from Native land-owners under government supervision. There was a tradition of conservative Dutch Residents reporting that supervision of land lease agreements by the Native officials was satisfactory as long as this was itself supervised by Dutch officials.⁴⁸⁷ The revised Ground-lease Ordinance of 1918 included the possibility of leases for up to 21 years but continued the ban on successive cane cropping on the same land.

Following the general tendency in the colonial government's administration, the system of land-leasing had been increasingly standardised. Originally, the Ordinances had applied only in the so-called "government lands", most of Java outside the Principalities of Surakarta/Solo and Yogyakarta. The semi-feudal appanage system of land-ownership and leasing in the Principalities had been gradually changed by the

⁴⁸⁶ For more information on the Japan Sugar Refining Company see Appendix 5. The Straits und Sunda Syndicaat also had some involvement in the management of *soekoredjo*, including arranging for the appointment of a European superintendent of it in 1918 (see reference in the previous footnote). During the First World War, with Dutch government concerns about potentially disruptive activities among the German population in the Indies, the Helfferich brothers had been investigated on suspicion of weapon-smuggling (Locher-Scholten 1981: 65).

⁴⁸⁷ Eg. MVO Resident Semarang 1930: 24.

government, but not until the late 1920s were the land and associated labour arrangements there essentially the same as in the rest of Java. The conversion was mainly completed by about 1925. In one exceptional case, a Native smith at *Gesiekkan*, near Yogyakarta, was dismissed for propagandising against the continuing obligations of compulsory labour services in the Principalities. It was not until 1927 that *Sewoe Galoor* became the first sugar factory in the Principalities to be operated entirely with free labour.⁴⁸⁸

During the depressed early 1930s most managements attempted to change the land-lease arrangements they had made with Native land-owners. The Residents' ten-yearly review of the new 1918-20 ground-lease contracts had produced new minimum prices at the end of the 1920s. With the start of the Depression managements challenged many of these as their main price-basis, the price of rice, fell. There were far more radical changes over the next seasons, as factories started reducing their planting initially by management choice then by government direction. Consequently factories reduced, postponed or broke their long-lease arrangements.⁴⁸⁹ For example, in 1933 the HVA decided to break all its long term lease contracts, and planted nothing. Most factories were expected to similarly transfer to short-term leasing. This worried officials as the simultaneous restrictions of planting would produce a drop in demand for land, and a consequential drop in rents paid to Native owners. As with the original agreements on leases, these changes also had to be overseen and approved by government officials. The government laid down guidelines after discussion with interested parties, including the Syndicate. These guidelines, which included suggested methods of handling disputes and deciding appropriate compensation, were issued from the central government as instructions to the regional Residents who then arranged for the supervision of lease changes by factory managements in their region. The changes in some areas caused dissatisfaction among many landowners as they

⁴⁸⁸ For the two cases see *Indische Courant* 12/6/1925; *Indische Courant* 29/7/1925. For a more general account of the changes see Jong 1930: 85ff.

⁴⁸⁹ MVO Res. Kediri 1934: 22.

were considered too biased towards the factories, assisted by officials, or were clumsily handled by the factories.⁴⁹⁰ In official reports blame for conflicts over compensation were usually put onto the factory management, thereby justifying the intervention of officials.⁴⁹¹

Approaches by land-owners varied. At times they utilised the resource of the legal system. In some cases intervention by officials was considered necessary. It was always officially reported as successful with no complaints from lessees or lessors. There were cases of difficulties caused when locally organised groups demanded more or better compensation, but the authority of the government's hierarchy of instruction was declared effective in keeping "Native politics" from widespread exploitation of the potential for conflict.⁴⁹² Nevertheless, this might not have prevented local exploitation of the poorer by the richer Natives. Writing two decades later and apparently basing his account on local retrospective accounts in one area, the American anthropologist, Clifford Geertz, claimed that in many cases the system of compensation payments negotiated for breaking leases had been exploited by village chiefs and other wealthier or more influential Natives. He quoted assertions that they had bought lease contracts from their owners at prices lower than what they then received from the factories, and were also in a stronger position to negotiate higher compensation for their own existing contracts.⁴⁹³

The overall ground-lease system was maintained, with only minor local adjustments. Assumptions of "normal" were exposed and broken. Special government approval was given for several cases of second cuts (ratooning) of dry land plantings and of growing or regrowing cane for direct milling in seedling plantations. These practices were normally illegal, as they involved extending land use beyond one season or exceeding a maximum planting area. Changing the regulations was considered, but it was argued at senior official level that this should not be done because the present

⁴⁹⁰ Eg. MVO Res Cirebon 1932: 27.

⁴⁹¹ Eg. MVO Gov. Mid. Java 1933: 62-3.

⁴⁹² Eg. see MVO Res. Malang 1934: 23; Japara-Rembang 1936: 93-4.

⁴⁹³ Geertz 1956: 58-9.

situation was extraordinary and temporary. Legal change would add difficulties to the sugar industry and discussion of it would provide opportunities for attacks on non-Native capitalism in the People's Council.⁴⁹⁴

Until the start of the Depression other factory level concerns had only occasionally been referred to in government reports. These cases involved things like rail lines on public roads, repair of roads after cane transport, and involvement by officials in local mediation between factories and employees or contractors. Factory management attracted unfavourable attention of the government for its industrial relations, wages or other conditions.⁴⁹⁵ After signing the treaties from the 1919-21 International Labour Conferences in Washington, Genoa and Geneva the Dutch government set up inspection and regulating bodies - in the Indies a Labour Office in the Justice Department.⁴⁹⁶ This investigated and reported on complaints in specific industries. These complaints never involved the sugar industry. Also, in 1922 the Office had started producing quarterly reviews, included in the Central Statistics Bureau reports. JSWB staff extracted from these what was of most importance to the industry in the "social-economic area" and published this material in the *Archief*.⁴⁹⁷

Management of the sugar plantations on Java clearly differed from that of the tobacco and rubber plantations on Sumatra. One indication of the distinctive difference of the indentured coolie labour system in Sumatra was the Deli Planters Association's

⁴⁹⁴ MVO Gov Mid. Java 1933: 65-6.

⁴⁹⁵ It was only in the later 1930s, as some economic recovery and costs increases appeared, that the government started to institutionalise "coolie budget" surveys and prescribe a minimum wage. This was demanded from sugar management from 1937 (BENISO 1937: 19-20; 1938: 20; Syndicate 1937: 17-8; 1938: 14-5). Previously, employment of the Native workforce for each factory had been within the local labour market (eg. see Hart in *De Indische Post* 1924).

⁴⁹⁶ Governor-General Van Limburg Stirnum had moved to institute this Office as a centralising and coordinating body for the government's various potential involvements in labour relations in January 1921 shortly before his departure. Its founding was completed in December by his successor Fock but its resources cut drastically as part of his government's economising in 1922 (Locher-Scholten 1981: 105).

⁴⁹⁷ "Sociaal-Economisch Overzicht", 1923: 206-7, 705-9, 1306-9; 1924: 869-72, 1290-4; 1925: 1168-71, 1294-9; 1926: 274-81, 504-9, 863-7, 1441-6; 1927: 313-5, 689-92, 890-4, 1214-9; 1928: 369-75). Over 1927-1935 the Labour Office published a series of 11 reports into specific industries. After Provincial Governments were established in the late 1920s it set up Provincial branches which also reported (eg. MVO Gov MidJava 1933: 253-6).

joint service to track down deserting coolies. There was no Java equivalent to this service, which was given up only in 1927 when the activity was left to the police. Moreover, no need was ever expressed to set up a Java sugar industry section of the government's new Labour Inspection system under which Native officials would be appointed to regularly visit plantations to establish continuing contact with the workers and monitor their conditions, as was done elsewhere.⁴⁹⁸

L. ETHNIC SEGMENTATION AND MANAGEMENT

Wages, conditions, facilities, career possibilities and pensions for Europeans and Natives were quite separate.⁴⁹⁹ The modern enterprise of the sugar industry was considered to be based in European technology, organisation and personality. Europeans and Natives were employed differently. Although the Administrator made the formal decision about accepting his subordinate European staff, the management levels above him were directly involved in their employment. They also gathered and kept detailed records about them. In contrast, management above the factory Administrator, with a few exceptions, did not normally involve itself with the practical details of employment or conditions of Native employees.⁵⁰⁰

Moreover, even the exceptional cases of involvement in Native employment by management above the factories embodied ethnic differentiation as they applied only to Native workers, not to Europeans. A general condition decided by Directors of all factories' companies concerned the annual discretionary bonus to be paid to the "higher" or permanent Native workers. However, from the early 1920s even these decisions appear to have routinely followed the JSWB recommendations, within the light of what was being paid by nearby factories. Another involvement, after the mid-1920s,

⁴⁹⁸ *Archief* 1927: 892.

⁴⁹⁹ See Appendix 3 for more details on wages, conditions and pensions.

⁵⁰⁰ For information from the management perspective about employment of Native workers see Levert 1934, 1937.

had been when Administrators proposed individual, named, Native employees as eligible for long service awards or pensions. Only higher management could normally commit the company to pay. A further, more unpleasant, involvement was in the reporting of accidents, consequences and proposed pension or other payments to seriously injured Native employees. In relation to Native age pensions, company representatives in their Java offices or Directors in the Netherlands could point out a misapplied formula, an insufficient number of years' service or insufficient age and minutely recalculate or disagree with the Administrator's recommendation in relation to a few guilders a year, leaving the Administrator to argue the old employee's devoted service and physical inability to continue or the inaccuracy of the estimated age recorded in the Fingerprinting Bureau's record system⁵⁰¹

Facilities provided by the factory for the employees were clearly segmented by race, the Europeans' being far more expensive. They were further segmented among the Native employees by rank and area of employment; "intellectual" office or laboratory employees, artisans, foremen, labourers⁵⁰² The European management lived in a housing enclave next to the factory, in houses matched to their position in the hierarchy. Some of the higher Native employees were provided with much lesser quality housing in another area. Several individual factories and combinations of companies provided facilities for lower technical training - but only for Natives⁵⁰³ Any elementary schooling for the children of European employees was separate from Natives'. Hospital or nursing facilities had separate European and Native sections, with the latter providing for further dividing between coolie and higher status Native in-patients. Facilities such as tennis courts or, eventually, occasional swimming pools were for Europeans, although soccer could be common. The main "Society" or social

⁵⁰¹ Eg. in ARA 2.20.01 NHM (Doekoewringin archive) Inv.Nr. 11555, 11556

⁵⁰² Eg. See the fire-insurance valuations of the houses at *Peterongan* in 1928 (ARA 2.20.02 NHM Inv. Nr. 12086). Also see Karsten, in *De Indische Post* 1924, for a more general picture of assumptions of ethnically differentiated housing.

⁵⁰³ Eg. at *Peterongan* and at *Probolinggo* in the late 1920s, both paid for by several estates, the head of the latter also supervising several other Regency-assisted local low level technical courses, or the small 2-year "Native Trade School" of *Tandjong Tirto* (MVO Resident *Modjokerto* 1931: 90; MVO Res *Probolinggo* 1932: 40; *Jong* 1930: 72-6).

club-house for relaxing, drinking, eating and probably a small shop would be for Europeans, with paid Native staff, as would reading and other recreational clubs. Native societies and associated facilities might be restricted to the clerical or similar staff, or tradesmen, or foremen. The common Native mutual help societies, or shops, were similarly exclusive, with reading interests limited to the "intellectuals", likely to be the only sufficiently literate people. A Native shop associated with the factory, as with the European club and shop facilities, would be supervised by a European clerical employee of the factory who would be paid a supplementary wage from the proceeds, and other Native employees who would be paid a fraction of this.

Beside the ethnicised hierarchies of working life, social and cultural segmentation on the estates was pervasive. Europeans and Natives wore different uniforms. Separate European and Native celebrations were held for the end of the campaigns with Europeans attending the Native functions as observing guests but not vice versa. At this time the European club-house at *Tjomal* accepted as guests with accounts several Europeans from nearby towns and factories, but the highest local Native official, the Wedono, was the only non-European with an account. The Sugar Union-affiliated paper, *De Indische Courant*, continually quoted from and commented on the Dutch and Dutch Indies press, but this did not include significant material about Natives. Belief in difference was pervasive. Soon after its birth, this self-proclaimed employees' newspaper had started a shortlived section "Out of the Native World" (*Uit de Inlandsche Wereld*), introducing it with:

[The] title says it all, we will give a quick look in the sphere which, if we may believe Kipling, never the us can be [We] can see movements in the Native world. ... It is not only the Native world which for us stays all too much a closed book, the Chinese and Arabic world in NI are even less known to us. ... [Commonly, relations between] Natives and Europeans [are]... action and reaction - disappointingly. (*Indische Courant* 28/10/1921)

In the mid-1920s, reporting on the Java Institute Congress, the paper had referred to the strong differences between Western and Eastern civilisations, the West being superior and the Javanese not yet developed to the same level.⁵⁰⁴ In general, Natives were stereotyped as ignorant, superstitious and fatalistic, needing Europeans to develop agriculture, health and education for them. In 1933, interpreting the support given to the organising of industrial action in 1919-20, Native workers were represented as having been stupid and easily fooled, intimidated or threatened by the promises of agitators.⁵⁰⁵ In 1921 the Native employees' demand for a slametan ceremony at *Djatiroto* to appease earthquake-causing evil spirits was referred to sarcastically in the *Indische Courant*.⁵⁰⁶

Prescriptions about ethnic segmentation were not simply a tool of hierarchical management or European employee self-interest, but were inherent to colonialist ideologies and articulated in party policies.⁵⁰⁷ The defensive conservative ideology of colonial relations involved a basic distinction between "European" and "Native", or "Western" and "Eastern" categories, cultures, roles and interests. Its policies included their separate development in the colony through differentiated education for their respective economic futures, with Europeans in the managerial and more technically skilled positions and less ambition-generating training for Natives. This ideology also promoted the protection and support of European capital, including its plantation interests - in part for the otherwise unattainable benefits these brought to the general economy and local populations. This ideology was embodied in the Netherlands by the

⁵⁰⁴ *ibid* 31/1/1925

⁵⁰⁵ Eg. *Poerwodadi* gedenkboek 1933: 114-9.

⁵⁰⁶ *Indische Courant* 19/10/1921.

⁵⁰⁷ For further material on the political parties referred to see Hansen 1973, 1977, Knotter 1989 for the Dutch Social Democratic Workers Party, SDAP, and Cramer 1930 its Indies Social Democratic Party, ISDP; Colijn 1928 for the Anti-Revolutionary Party's colonial policy; Vaderlandsche Club 1931, 1933, 1935, n.d. a, b and c, Drooglever 1980 on the Fatherland Club (the latter esp. 266-7 for initial office-holders); Indo-Europeesch Verbond 1920, 1929, 1937, Razoux Schultz-Metzen 1936, Petrus Blumberg 1939a for the IEV; Gobeé 1933 for a contemporary summary description of all parties. Also see Nationale Bond Tegen Revolutie 1925 for an example of the more extreme anti-communist, anti-Nationalist political ideologies that were expressed, and Blumberger 1928, 1931/87 for the less overt anti-communist literature published. Van Vugt 1993: 36 remarks on the Semarang group.

Anti-Revolutionary Party and in the Indies by the Fatherland Club party (*Vaderlandsche Club, VC*), officially established in 1930 on the strengthening reaction against Native demands and gains during the 1920s. The opposing democratic socialist ideology voiced by the Social Democratic Labour Party (*SDAP*) in the Netherlands and the Indies Social Democratic Party (*ISDP*) in the Indies involved more subtle differentiations. In these, ethnic categories were further divided into "capitalist" and "worker", with these class distinctions being at least as basic as those of ethnicity, and with a more negative view of large capital. From its foundation in Soerabaja the VC attracted strong support among sugar management, with senior staff from factories prominent among the office-holders of a majority of its branches in sugar regions. Mr. P.M.C.J. Hamer, then a Secretary of the JSWB, was one of its founders, the other, Zentgraaf, was editor of the Syndicate-affiliated *Nieuwe Soerabaia Courant*. After a first blooming, the VC lost about half its members and became less negative and reactionary, but this was partly because the government and the European political main-stream moved closer to its orientation. In the hardening segmentation of Indies society there was an increasing gap between the European and Native movements among intellectuals. This did not support joint development of any practical programs of activism which could have troubled the practices and assumptions of management.⁵⁰⁸ As the political representative of the "White Front" against the "Brown Front", the VC continued in its quickly attained place as the second largest European party. The Indo-European Union (*Indo-Europeesch Verbond, IEV*), representing the perceived interests of the great majority of Europeans, the "stayers" (*blijvers*) mainly the Indo-Europeans, was much the largest interest group. Noticeably, the *Indische Courant* sided with the IEV and was warily critical of the VC. Apart from the IEV, the VC and the declining PEB, the several other Indies parties associated with confessional or secular Netherlands parties of the centre, left or right, including fascists, had only small memberships, mostly in the cities. Apart from some

⁵⁰⁸ For elaboration and evidence of this see VanDoorn 1983; Dolk 1993.

government officials there was only a small reformist group of Europeans, mainly based in Semarang. As the various municipal, Residency, Regency and Provincial councils were established, several sugar factory Administrators were appointed or elected as locally important Europeans.⁵⁰⁹ Their party affiliations varied, IEV, some VC or PEB.

M. ETHNICITY IN FACTORY MANAGEMENT

Factory management embodied colonialising ethnic segmentation. Only exceptionally did Natives ever appear among the lists of management employees - with these at the lowest level of field supervision. Only a few cases were found in the records of management: R.S. Soendaroe in *Kebon Hardjo*'s last planting in 1917; the apparently astounded objection from *Kadipaten*'s Director to the news that the Administrator had promoted a long-established Native Field Chemist, Mas Ardjo, to be a Field Supervisor in which he stated assumptions about Javanese authority and responsibility but grumpily accepted that the action taken was now too late to reverse; when H. Pontjoedho left the Colonial Bank-managed Gending in 1927, aged 36, he was an Assistant Field Employee and as a Native with "equivalent to European" status he was eligible for a pension when he turned 50 in 1941, although his wife was not eligible for a widow's pension as she had been legally considered a non-European when she married him. The annual lists of two or three dozen employees gaining the Syndicate's Sugar Chemist Diploma rarely included a Native name. M. Wisaksono Wirjodihardjo in 1924 and W. Adikoesoemo in 1926 were exceptions, where they were employed is not known. There were occasional Native names among the "Personnel" in the office of a factory, normally European or legally accepted as equivalent, such as Mas Bagoes, Assistant Book-keeper at *Kanigoro* until he retired with a pension in 1931.

⁵⁰⁹ Lists were in (eg) MVO Res Cheribon 1930: Bijl II, IV; 1932: 23, 25-6, 30-31; Appendix to MVO Res Pekalongan 1932: 14; MVO Gov Oost-Java 1933: 15-6.

Very few Chinese were employed in factory management, though not unusually as subordinate clerks or cashiers. The Oei Tiong Ham company owned five factories, its most prominent being *Redjoagoeng*, rebuilt in 1927 to become the first electrically driven mill in Java, one of the largest overall and the largest making crystal sugar.⁵¹⁰ At that time it had forty five European staff.⁵¹¹ The company employed and promoted to very senior management a small number of highly expert local Chinese staff who had been to the Netherlands or Germany to be trained, across the company. These included the brothers Ir. (later Dr.) Yap Kie Ling* and Ir. Yap Kie Tjwan*, Ir. Liem Ghik Djien* and Sie Swie San*. In 1930, among the twenty eight staff at *Krebet*, one was Chinese, at the time a Chemist but later its Administrator; among twenty six staff at *Pakkies*, one Cashier was Chinese; among twenty one at *Ponen*, a Cashier and a Weighbridge Operator were Chinese; among twenty eight at *Tanggoelangin*, a Second Mechanic was Chinese. The corresponding 1930 information for *Redjoagoeng* is not available, however in 1939 there were five Chinese among the thirty one listed staff, none in higher ranks - two Field Supervisors, a Second Mechanic, a Weighbridge Operator and two Warehouse Employees. It appears there were also other trained Chinese employees in the Oei Tiong Ham factories, as later reminiscences by an ex-Director recalled Chinese mechanics who, like the Dutch, had started their technical experience in ships.⁵¹²

More Chinese were employed in the less advanced Liem Tik Koey/Lie Djing Ham trio of factories. For example, in *Baron's* last milling year three of the nine remaining staff were Chinese: Lie Djieng Tjay, Administrator since 1916; the Book-keeper Tan Bain Hing; and the First Chemist Liem Khik Kie. Its small sister, *Djoewono*, had thirteen Chinese-named among its twenty two staff, including the Administrator Tan Bian Kwie, most office, field and weighbridge employees but none of the mechanics or chemists.

⁵¹⁰ Emmen* 1928.

⁵¹¹ De Vries 1928: 183.

⁵¹² Kunio 1989: 156.

Most Chinese in the industry were in the teams of "Chinese cookers" (*Chineesche kokers*) who lived at the factories, probably in separate accommodation, only during the campaign. These Chinese sugar cookers were paid much more than Native employees, including Native cookers. Their presence appeared ubiquitous. It was not directly commented on in management reports, but is indirectly noticeable in such as the 1907 site plans for *Gending*; 1926 assumptions by *Kadipaten*'s Director that an Administrator-proposed school for future cookers and foremen was intended for Chinese; 1927 housing reports from *Kanigoro*; the 1928 Administrators' reports of fabrication costs from *Gending* and *Kanigoro* using the standardised Colonial Bank itemisation which included "Chinese" as well as "European" and "Native"; 1939 wage lists from *Doekoewringin*; and Van der Linden's later enumeration of normal factory employment in his general description of the industry.⁵¹³

Factory management was in the hands of men legally classified as Europeans, with less than a third of them born in Europe.⁵¹⁴ The lowest "European" positions were dominated by Indo-Europeans with few if any special qualifications, plus an occasional more qualified person working temporarily in these positions to gain initial industrial experience. However, the Indies-born were not limited to these. They also filled half or many more of the upper positions. There were usually at least as many "Indische" as "totoks" in the middle and upper categories. These included the "upper positions" of First Mechanics, Fabrication Chiefs, Field Supervisors, Secretary-Book-keepers, Book-keepers, even the First Employees and similar from whom the Administrators were chosen. Many of the Administrators of the factory-estates had been born in the Indies. Thus Geertz' repeated claim of "a 'spectroscopic' organization of the sugar industry, 'caucasoids' in the managerial roles, 'mongoloids' in the unskilled roles, and

⁵¹³ Van der Linden 1946: 21-2.

⁵¹⁴ The following claims about employees based on an almost complete 1923 survey of employees by the central employer organisation (Tichelaar 1924-5); about managers on scattered biographical information and on lists of IEV representatives; about wives on the Colonial Bank's pension records. Van der Marle's 1951-2 extensive analyses of the European ethnic mixing is at the overall level and does not include specific industry analyses.

'mixed' Eurasians in between", apart from an outdated racialisation and confusion of Native and Chinese, was misleadingly inaccurate.⁵¹⁵

The overall picture is clear, at least two thirds of those categorised as Europeans were Indies-born. Closer examination of particular streams and levels within the employment of Europeans in the mid-1920s only elaborates this.⁵¹⁶ In the administrative stream, two-thirds of the handful of Secretary-Book-keepers were European-born, but there were as many Indies as Dutch-born among the more normal Book-keepers and nearly twice as many Indies as Dutch-born among Assistants, while the lowest categories were dominated by Indies-born Europeans. Majorities of the First and Second Mechanics had been born in the Indies, with the lowest category, of Third or similar, mostly Indies-born. A majority of the most senior category of chemists, the Field Chemists, had been born in the Indies, with the Fabrication Chief and ordinary Chemist categories evenly divided. Among the field personnel, a majority of all First Employees, normally the second in charge of the estate, were Indies-born, as were three quarters of the Field Supervisors and the great majority of the lower ranks. Where the remaining "European" personnel, comprising the lowest categories such as supervisors of weighbridges, of transport or railways, and of the cane-cutting work, had been born was not reported, but a simple calculation of subtractions from the totals indicates that these categories were dominated by Indies-born Europeans.

Below these normally permanent management ranks was a small number from the relatively uneducated and poor communities of the Indo-European "Indos", existing between the more clearly "European" and the "Natives". Occasional cases of "Indo workman" appear in personnel lists, including one at *Gending* for a decade from the mid-1920s until he died, and three who were employed at *Doekoewringin* in the late-1930s as a semi-charitable assistance against unemployment. This Indo trio were given more or less the same work as senior Native supervisors but paid more, as "European foremen", "European artisans" or "European clerks" using terms used for

⁵¹⁵ Geertz 1956: 50; 1965/75: 52. The quotation marks were not used in his earlier version.

⁵¹⁶ For more detail see Appendix 17.

Native occupations but not existing in the JSWB's European salary scale, and were on the Native pension lists. The Administrator pointed out in his correspondence with the Director that not as much could be expected of them as for "full-value Europeans". In 1931 the departing Resident in the sugar area of Modjokerto reported to his successor that

apart from some exceptions [the Europeans] are quiet elements who find a good existence. To the exceptions belong a number of Indo-Europeans who find temporary work at the sugar factories during the campaign but after it finishes are unemployed in the centres of Modjokerto and Djombang, not seldom at loggerheads with the Native population. However they have the greatest respect for the police".⁵¹⁷

The Dutch-born tended to have had more technical training than the Indies-born. More were formally qualified, and their sugar training diplomas were from the longer Dutch courses. They normally had European diplomas, some having Indies ones as well. Only a minority of the diplomas of the Indies-born had been gained in Europe. Most of these were among the Chemists or Fabrication Chiefs and the First Employees, about a half having European diplomas and about two thirds Indies. The proportions of formally qualified among the office-administrative Indies-born was clearly lower (small minorities, compared to about half of the Dutch-born). There were not great differences between the qualified proportions among First Mechanics (most were), whereas among Second Mechanics more Dutch-born had diplomas (most, compared to three quarters of Indies-born). There was little difference overall between qualified proportions among the chemists, most of the two upper ranks having diplomas, but with about a tenth fewer of the Indies-born ordinary Chemists having

⁵¹⁷ See, respectively, ARA NHM (Doekoevingin archive) Inv.Nr. 11557 Correspondence between Administrator and NHM Factory, especially Nrs 18, 27/5/1938; 22, 8/6/1938; 40, 3/11/1938; MVO Resident Modjokerto 1931: 22. See Mansvelt 1932, 1939 for examples of the continuing underlying ethnic assumptions and identifications of many conservative senior government officials.

one. A somewhat lower proportion of the Indies-born than the overseas-born First Employees had at least one diploma (fifty nine to seventy one per cent), whereas only about one in three of the Indies-born Field Supervisors had one, half the rate of the Dutch-born. As this latter rate was nearly the same as for Dutch-born First Employees there is an impression of different patterns through the ranks of field employees between Dutch-born and Indies-born staff. In the lowest rank of field management, Assistant Field Supervisors, few of the Indies-born but over half of the Dutch-born had a diploma, further indicating different patterns.

For several understandable reasons, at least as many of the wives of the European staff were Indies-born as were their men.⁵¹⁸ A few were Native women, usually not eligible for widow's pensions, although exceptions were made. In one example, after the death of a long-serving and reliable Indo-European employee with a Native partner, the *Kadipaten* Director agreed with the Administrator that pension and other assistance should be provided to her.⁵¹⁹ The social complexity in relationships within the little European enclaves involved these cultural and ethnic varieties, intersected by wives' and staff class backgrounds, by age and by the hierarchies of staff ranks.⁵²⁰

The European caste in the Indies was only ever a fraction of a per cent of the total population. The rarity of Europeans was even more pronounced in rural areas where factories were situated.⁵²¹ Relatively few of the Europeans worked in the factories and plantations of the sugar industry; in 1930 only about four thousand out of

⁵¹⁸ See Appendix 18.

⁵¹⁹ ARA 2.20.08 Kadipaten. Inv. Nr. 238 Personeel. Director's letter 2/1/1935.

⁵²⁰ There is an increasing literature of record and speculation about the general ethnicity and sexuality issues involved in European colonialism in South East Asia during this period (eg. Stoler 1991, 1992, 1995a). Much of this in terms of the Indies was used in Gouda 1995: chapter 5, and is noticeable in women's advisory books of the time, such as Lith-van Schreven et al 1936. However, their embodiment in the lives of those in the sugar factories' European enclaves has not yet been reported on.

⁵²¹ Eg. MVO Resident Semarang 1930: 28; MVO Resident Rembang 1931: 10; MVO Res Cheribon 1930: 34; 1932: 62-3; MVO Ass-Res Ponogoro: 1900, 1925; MVO Resident Malang 1934: 3; MVO Res Pekalongan 1932: 14.

the total eighty five thousand Europeans officially in the workforce⁵²² These European management employees continued to live as a tiny ethnic minority, numerically insignificant in the factory localities.

N. FACTORY MANAGEMENT

As the scale of operations had increased, the number of European staff also increased to between about twenty and a little over thirty at the majority of factories, with fewer at the small and many more at the very large ones.⁵²³ However, the European staff hierarchies established earlier in the twentieth century did not change. There had been some additions and specialisation in duties and titles among the lower technical staff, as locomotive traction was brought into the fields and electricity into the factories.⁵²⁴ In mid-1932 there was a proposal to define a new position of "Factory-Chief" combining the current roles of the Fabrication Chief, at the head of the hierarchy of chemists, and First Mechanic, heading the mechanics. This caused staff concerns about promotion issues and the need for additional training as well as debate about other advantages and disadvantages. It does not appear to have been introduced.⁵²⁵

The formation of the JSWB and the resources put into it transformed and centralised important elements of industrial relations, with member managements using its published policies as the basis for any negotiations.⁵²⁶ Given the standardisation of

⁵²² Derksen 1938: 29.

⁵²³ For more detailed figures see Appendix 15.

⁵²⁴ See Appendix 4.

⁵²⁵ See "Instelling Functie Chef-Fabriek", and subsequent articles in *De Suikerbond* 1932: 542-5. Factories' personnel lists in the later 1930s did not show this or other changes.

⁵²⁶ This standardisation ranged across the use of appointment contracts for European employees specifying that JSWB rates and conditions would apply; the use of JSWB-specified arrangements with Native cutting and transporting contractors; the setting of an industry-wide determination of the annual bonus paid to non-casual Native employees (in terms of each individual's equivalent monthly wage calculated each year on the average profitability of JSWB-member companies); and the setting of minima and maxima for daily paid unskilled [coolie] male, female and child labour.

wages and conditions, there was little poaching of staff. The JSWB's control over its members' European employment conditions was tight - demonstrated when companies applied for approval to make minor variations in their previous employment structure in response to the 1930s crises. As an example, in late 1931 the Colonial Bank requested approval to reduce the factory personnel at its factories to two Chemists and two Second Mechanics, plus some having a reserve Chemist or Mechanic only to assist the others when necessary. The Chairman of the JSWB Management Committee, still Talma, advised its members that as this appeared to not break the guidelines for middle-sized factories the matter did not need to go to the full Committee. In another case, the Oei Tiong Ham Concern applied to be allowed to employ Assistant Field Supervisors, it being made explicit that they would not be carrying out independent work, would be under the control of Field Supervisors and would be not be exchangeable with them. The JSWB Management Committee was concerned that this could be a way of substituting cheaper workers outside the JSWB-salary regulations, but was prepared to be convinced by the detailed application and accepted the proposal.⁵²⁷

Nevertheless, before major decisions the JSWB's processes required widespread discussion and agreement among its members.⁵²⁸ It continued to prescribe Europeans' wages until 1934, then decided to abandon this standardisation and allow more flexibility until the economic situation improved. The system was reinstated in 1938, but with only minimum rates prescribed.⁵²⁹ The basic employment conditions of factory management staff were thus effectively not only out of the hands of the factory Administrator but also those of the factory's owning or managing company. These levels of management, however, were directly involved in employment and promotion.

⁵²⁷ Reported in letter from BENISO Chairman to Members, No W1813/31, 15/12/31.

⁵²⁸ In an extreme case the decision by the JSWB central committee to scrap its scale of European wage rates was finally taken (in 1934) after its original proposal was discussed and agreed to by its own Advisory College, the BENISO administrative committee and a meeting of all JSWB members.

⁵²⁹ The NHM then published its rates which were both well above these minima and had larger steps (*De Suikerbond* 1938: 2-3, 98-9), as were the new salaries elsewhere, such as at *Tjomal*.

Factory management staff were under increasing supervision. As well as receiving advice from the Research Station, they were also subject to compulsory inspection and advice from the expert agricultural, chemical and technical Advisers provided by the management companies, the majority with graduate Ingenieur or Doctor qualifications.⁵³⁰ Their internal administrative practices and records could also be closely checked by visiting auditors.⁵³¹ The work of factory management staff could be monitored increasingly closely. Fine-grained quantitative reporting about daily activities went to the Administrator, some of which was then aggregated and sent on up the company management hierarchy. Also, factory managements continued to send very detailed operating data to the Research Station for its joint milling control, which now included juice and fuel-use studies. Comparisons used in evaluative reports might be across Java or parts of it if based on data published from the Research Station's industry-wide surveys, or across the small number of factories managed by the same management company, or across a small number of factories in a local area who had shared some of their operating information.⁵³² Increasing sophistication of the technology being managed required increasing sophistication in its management, and provided for increasing surveillance of that management. The technical controls over the operating of equipment, the financial controls over field and factory piece-work and the recording of the flow of materials through the system required highly detailed and accurate measuring and recording. As the European staff were responsible for managing all these activities the records could be used by those above them to monitor, compare and evaluate their work individually, continually and impersonally.

The independent factories might employ for themselves, but employees working in factories managed or directed by companies which ran several would be

⁵³⁰ Personalia 1930-1: 110-7.

⁵³¹ Eg. See the detailed reports of the three or six monthly visits by two person teams to the Colonial Bank-managed *Bandjaratma*. ARA 2.20.04, Koloniale Bank, Inv.Nr. 987, *Bandjaratma*. Administratief Rapporten 1927-36.

⁵³² For a late list of the milling data required and the details of the overall fabrication control instructions see *Archief* 1931: 647ff and Honig 1931 respectively. For a description of the Station's servicing engagements with the industry see Kuyper (in *Indisch Post* 1924).

employed by that company. Disputes between the companies owning these factories could arise. One case noticed was over who would pay for individual employees who had been brought out to Java by the common management company. They were put in a pool available for placement at any of the factories but not immediately placed. Current hopeful employees also objected. In another case, an employee brought out by the management company in spite of concerns about his health was immediately placed but, soon having to be discharged and returned, brought disagreement over whether all the owning companies served by the management company should share the costs or only the one owning the factory at which he had briefly worked.⁵³³ Presumably some staff were recruited through the advertisements which appeared in Java newspapers.

The employees would expect to be promoted between the factories within an owned or managed group, rather than within a single factory in it. Inter-personal difficulties could also be solved by inter-factory intra-group transfers. Employees did apply for and gain promotions or other preferred positions at factories outside the same-managed group, but this was not normal. Irrespective of whether within or between groups the ladder of promotion continued to have the same rungs. These either went up within the mechanic or chemist ranks inside the factory before a move out to the bottom of the field hierarchies and then a continuation up or, for new recruits without qualifications, placement in the lowest field or in one of the lowly weighbridge or store supervising positions then perhaps up. The rungs could be ascended at different rates but could not be missed. Promotion became reliant on annual assessments by Administrators. In some cases, secret conduct statements were apparently had been used by management, and opposed by the Union.⁵³⁴ For those employed through the large managing companies the assessments involved standardised forms and criteria, including "suitability for further promotion"⁵³⁵

⁵³³ ARA 2.20.08, Kadipaten, Personeel, Director's letters 24/12/1929, 10/3/1931.

⁵³⁴ *Archief* 1926: 865.

⁵³⁵ See Appendix 17 for more details about promotion, including these forms.

Judging from the documentation now available, management hierarchies were generally accepted and operated smoothly. Only very exceptional reports of conflicts appeared in records intended for internal company use or in the Union paper. The latter published an Administrator's account of his conflict with his Superintendent, the only conflict so publicised. According to the Administrator's detailed account, a Superintendent with only accounting expertise had been appointed at the request of the government by the Economic Affairs section of the Mangkunegara palace in Surakarta. His unwanted and allegedly ignorant interference and criticisms of the affairs of one of its two factories led to the resignation of the Administrator "after twenty two years, nine as an Administrator"⁵³⁶ Another exception was a press report that a cutting field supervisor had been dismissed from one factory in 1924 for fraud⁵³⁷

Remarkably, complaints about unjust promotions, unfair dismissals or victimisation did not appear. The authority of Administrators over their staff, the possibilities of arranging transfers to other factories owned or managed by the same company, and the standardised prescriptions of employment conditions through the JSWB seems to have been adequate to prevent or solve staff conflicts. Apparently few individuals were dismissed for inadequate performance, one being an Administrator, for "financial irregularities"⁵³⁸

Interestingly, there seems to have been few conflicts within the middle management system of the industry. Examples of conflicting reports and advice being sent up from different levels were not found in the variety of records consulted. Moreover, disputes between Administrators appear to have been limited to rare

⁵³⁶ *De Suikerbond* 1921: 866-72, 889-97, 915-24.

⁵³⁷ The apparent purchasing fraud carried on for some years by the *Tjomal* Assistant-Bookkeeper in his paid managing of the European "Society" club was only discovered by his successor in 1934 (see the 1934 and 1935 reports of the Society in ARA 2.20.39, *Tjomal*, Inv. Nr. 133, Verslagen: Sociëteit, Tennisclub, Leesgezelschap en Inlandsche Vereenigingen 1929-1939).

⁵³⁸ B.M. Leussen, from the Colonial Bank-directed *Kanigoro* at the end of 1930 by the Bank's Delegate in Surabaya (Kanigoro Board minutes 19/12/1930; 1931 Kanigoro Administrator's report). The exceptional press report of dismissal for criminal activity, such as a cutting field supervisor dismissed for fraud (*Indische Courant* 2/9/1924), do not fall into this category.

boundary disputes precipitated by legal imprecisions, and only a few cases of these appeared in records. Three cases were those between *Poerwodadi* and *Kanigoro* Administrators' during 1924-7 until final agreement between their management "parents", the Colonial Bank and the NHM; the dispute over planting seedling cane in another's factory-supplying milling cane area between the "Chinese factories *Koedjomanis* and others against the European factories *Tjeweng-Lestari* and others"; and the HVA's dispute with the Birnie's Oud Djember estate in the East Hook, which was similar but over planting seedling cane in a tobacco area closed for milling cane.⁵³⁹

Administrators were provided with a written detailed list of their responsibilities to their employers. These included the supply of book-keeping, detailed daily statistics and annual predictions in prescribed formats and appropriate relations with their subordinates, including treating Natives honourably and without promising more than could subsequently be supplied.⁵⁴⁰ As well as formal work relationships, Administrators were expected to involve themselves in more informal activities involving their European employees.⁵⁴¹ The previously-established promotion pattern, of Administrators being appointed only from among those in the management rank below, was maintained. There had been earlier reports of a first-time Administrator having a more experienced man appointed to oversee and advise him but this does not appear to have been general and it is not clear if such arrangements continued.⁵⁴²

⁵³⁹ For the first case see ARA 2.20.04, Kol. Bank, Inv. Nr. 1130; the other two are both in the 1931 East Java Governor's transfer report.

⁵⁴⁰ Eg. See the three pages of single-spaced 'Instructie voor den Administrateur', attached to the appointment letter, three pages of double-spaced payments and provisions, agreed to at the end of 1929 by the incoming Administrator of *Kadipaten*, B. Staverman. (ARA Personeel 2.20.08 Kadipaten, Inv. Nr. 238. Personeel. 1929 Nr. 5. "Aanstelling B. Staverman". 26/11/1929)

⁵⁴¹ Such as making arrangements for them about unsatisfactory second-hand car purchases, providing his own projector for showing films at the European club-house, or pursuing the payment of legal regular entitlements to a wife left in the Netherlands by an employee who repeatedly changed his employment in the Indies. (These and other examples appear in the archived *Kadipaten*, *Doekoewringin* and *Tjomal* "Personeel" and, for the latter, "Societiet" files.)

⁵⁴² This was C. van Senden* (see Appendix 8).

Most other European staff were employed with shorter written contracts detailing rights and somewhat open-ended responsibilities. Management continued to oppose bringing Native employees, even the most senior ones, into a similar standardised and regulatory system.⁵⁴³ These contracts for Europeans were standardised on the JSWB pattern. However, they could be over-ridden by government regulation. During the 1930s cut-backs in factories, Administrators and higher management considered and discussed the relative benefits of particular individuals being retained, put on half-pay or discharged. These calculations needed to take into consideration that from early in the Depression, the rights of European lower and middle management employees had been strengthened against upper management by the 1932 Crisis Ordinances entitling employees recruited in Europe to free repatriation and four instead of one month's notice or pay on dismissal. One upper management response to this was two forms of appointment letters, one with and the other without these rights, the latter to be used with local employees and those having contracts renewed. Another was to offer employees of factories that were closing temporarily a choice, between being dismissed and repatriated or being put on half-pay leave and, if they chose to spend this time in Europe, having to pay their return fares themselves.⁵⁴⁴

The great majority of staff had, and were expected to have, long-term careers in the industry but there were others who were employed for only short periods, moving between a succession of jobs in and out of the industry.⁵⁴⁵ At any particular time most European staff at a factory would have been there for several years, some for more than a decade, but with a very few for shorter times. Continuing into the twenties and thirties a minority of Administrators held that position for more than a decade, rarely two, either at one factory or moving between those owned or managed

⁵⁴³ BENISO 1933: 9-10.

⁵⁴⁴ Eg. see Syndicate Report 1932: 15 and several letters from the Kadipaten Director in the company's 1932 Personnel file.

⁵⁴⁵ Eg. see the previous work histories of *Doekoewringin* staff (ARA 2.20.01 NHM [Doekoewringin archive] In Inv.Nr. 11567 Folder of "Aanstelling brieven en Conduitestaten Personeel", especially "Nog in functie zijnd personeel" and "Oud personeel").

by the same company.⁵⁴⁶ This period of office on top of previous years of working up through the management ranks. For example, both E.C.J. van der Horst* and J.G. Bronkhorst* followed the complete classic career trajectories by Dutch-trained staff, from Assistant Chemist to Administrator, finishing at the end of this period. This was, of course, possible for only a small minority. Near the other end of the European promotion possibilities was P.J. Gill, born at Pasuruan in East Java in 1874. He completed elementary school there, worked from age 18 to 22 as a Weighbridge Supervisor at one NHM-managed factory and then for 33 years as a Field Supervisor at another nearby before being pensioned in 1929.⁵⁴⁷

Many management staff spent more than twenty years with a single company or independent factory.⁵⁴⁸ Nevertheless, it should be noted that the majority of the very long-serving employees were Native.⁵⁴⁹ Some of the experienced European managers in the late 1920s had been working in the factories and fields since the nineteenth century. For example, J.H.A. Baron van Ittersum started in sugar in 1893 at a NHM-related factory. After twenty years he reached his first position as an Administrator, held this for seven years before transferring to another NHM factory and, after a further eight years, retired in 1928 and became a Knight of the Order of Orange Nassau. In other examples, an old "sugar man" was quoted in the Sugar Union's paper reminiscing in 1927 about when he had started in 1877, and another in 1931 reported his starting in Java in 1892.⁵⁵⁰

⁵⁴⁶ Based on my survey of Administrators. The proportion was higher among the relatively few Chinese-named Administrators.

⁵⁴⁷ See *Doekoewringin* personnel files.

⁵⁴⁸ This claim is based on individual cases noted and on the records of 724 ex-employees listed in the Colonial Bank pension records (summarised in ARA 2.20.05 Koloniale Bank (supplement) Inv.Nr. 282. Stichting "Onderling Pensioenfond" Register van Inschrijving.

⁵⁴⁹ In 1925 collective management agreed to set up an long-service award system for Native employees, after 30 and 50 years. 830 thirty-year and 30 fifty-year awards were presented in 1926. A decade later the totals had grown to 2723 and 62 respectively (see Syndicate annual reports).

⁵⁵⁰ Bley 1927; XXX, "Wat zal de toekomst zijn voor onze suikerindustrie? Terugblik", *De Suikerbond* 1931: 1025-8..

There was an increase in professional consciousness among staff. Apart from the long-standing general European employees union, several regional technical associations of employees were established during the 1920s. They held meetings and were involved in the reviving of the *Archief* in 1940, but do not appear to have otherwise influenced management in the industry.⁵⁵¹ As well as among the staff classified as agricultural, chemical and technical, there was an increase in the level of training and technology for those working in the offices. The book-keeping systems for the various sections of the business, including piece work, indicated the detail of control, suspicions and cross-checking considered necessary. From the mid-1920s book-keepers started to write for the *Archief* describing their new machines and proposing improvements in the daily management of records and cash.⁵⁵² In 1929, the formation of a "company study group" for the Java sugar industry was announced by a Semarang-based member of the Dutch Society of Accountants.⁵⁵³

O. RECRUITMENT AND TRAINING

By the mid-1920s the only issues in management recruitment were about where European staff should come from and what training they needed. Non-Europeans were

⁵⁵¹ No reference was found to them or such as the local graduate associations of Delft and Wageningen engineers acting in any collective capacity with management. The Indies association of Wageningen Agricultural Engineers did not appear to address the specific concerns of those working in the sugar industry *Bericht aan de Leden Nederlandsch-Indisch Instituut van Wagenische Landbouwkundige Ingenieurs*, and *Notulen* of its 1934 AGM).

⁵⁵² The announcement was in *Archief* 1929: 1099-1102. Relevant articles were A N van der Heide, "Mechanische boekhouding toegepast op suikerondernemingen" *Archief* 1929: 801-15; ditto II, *Archief* 1930: 49-65; some comments on these in A W. S. d. J. "Mechanische boekhouding toegepast op suikerondernemingen" *Archief* 1930: 594-604; and a response in A N van der Heide, "Mechanische boekhouding toegepast op suikerondernemingen" *Archief* 1930: 774-7. Also see a related practical exposition on administering the ground-lease contracts, W Galjaard, "Ontwerp voor een Grondhuuradministratie" *Archief* 1931: 384-94. An earlier proposal on the financial administration of cane cutting and transport by the field supervisor, weighbridge supervisor and office had been published by H L Witmer, "De administratie van het riettransport", *Archief* 1924: 1232-7).

⁵⁵³ Djie Ting Liat (1929).

not considered. An important issue in the colonial dual labour market was the recruitment of new European staff from the Netherlands rather than in the Indies. As already mentioned, in the post-spike slump of 1922 it had been thought necessary to reassure potential recruits in the Netherlands that they could confidently keep studying as there would definitely be places for them in the Java industry. This situation continued although the general picture had darkened. A 1926 survey by the federation of European employees indicated that there was little unemployment among plantation personnel with training and experience but that young men without experience had little chance of finding work, and that there was high unemployment among Europeans wanting work in the lower administrative ranks of trade. Among other suggestions in the People's Council was a limiting of foreign workers.⁵⁵⁴ However, new Dutch staff continued to be sent out, upper management unresponsive to the Indies government's expressions of disappointment in this general practice and the government's stated preference for local applicants. The Dutch-language press expressed concerns, that were then quoted in the *Archief*, about the lower occupations where opportunities continued to shrink as many positions outside sugar, which had previously been filled by Indo-Europeans, were being taken by Natives.⁵⁵⁵ The setting up of a Secondary Technical School was urged in 1927 as many technically trained workers still needed to be imported from the Netherlands. In contrast, the supply of lower administrative workers was far above the demand and Native young men who did not know Dutch either found no employment outside government service or were forced to accept very unsatisfactory conditions. However, nothing was done about such a School until the end of the 1930s when concrete plans for the first were overtaken by the Japanese Occupation.

⁵⁵⁴ Eg. By an IEV representative in 1925 (Bosma 1997: 410-1)

⁵⁵⁵ *Archief* 1925: 1295; 1927: 892; 1928: 370. The wider ethno-political situation of the "squeeze" on Indo-Europeans is covered continually in Van Der Veur 1955 and in Bosma 1997: especially Chapter 8.

The sugar industry stayed dependent on Europe for its trained staff recruits.⁵⁵⁶ The importing of new trained employees ceased only in the 1930s when any new employment stopped and dismissals began.⁵⁵⁷ Many management staff, including the great majority of Dutch-born, now had secondary and higher technical qualifications, but a significant minority still did not. For example, one factory had increased its European staff from eleven in 1905 to thirty three in 1929. In 1905 only one had any post-elementary schooling, about three years at a secondary school, while all the others had only elementary schooling, several incomplete. None had any special technical training. By 1929 still about a third had only elementary schooling, but most of the others had several years of secondary schooling, about a quarter a full five years. Two had engineering qualifications from Delft, one from Wageningen, one had qualified at the Deventer Colonial Agricultural school, four had the Syndicate diploma, eight had various trade or technical school diplomas, and one a diploma in commercial studies.⁵⁵⁸

The need for increasing qualification among staff as the industry's technology developed was recognised and urged by employers and by the Union. The Union's paper editorialised its support for further training as an essential part of the development of the industry, for example in response to a disgruntled letter from an, apparently Indo-European, employee without training who complained of the increasing demands for higher qualifications. It also advocated specialised and increasingly advanced training to preserve the position of the Indo-European "stayer" (*blijver*) in preference to the less desirable "leaver" (*rekker*), and thus the longer-term future of the Indies in general.⁵⁵⁹

⁵⁵⁶ JSWB-member factories employed 147 new European employees with diplomas in 1927, 149 in 1928 and 150 in 1929, dropping to 108 in 1930, 53 in 1931 and 4 in 1932. Of those in 1928 and thereafter, only 32, 24, 12, 3 and 3 had Indies diplomas. Of those taken on in 1929 2 had higher and 72 secondary technical diplomas, 8 higher and 10 secondary agricultural, and 17 book-keeping diplomas. The corresponding figures in 1930 were 2, 72, 8, 10 and 17; in 1931 2, 37, 3, 8 and 3; in 1932 1, 2, 0, 1 and 0 (Syndicate Report 1929: 20; 1930: 13; 1931-3: 18)

⁵⁵⁷ The diminution of the Indies as a large provider of career opportunities for trained Dutch youth continued into the late 1930s (eg. see Derkson 1938.)

⁵⁵⁸ Jong 1930: 43-4.

⁵⁵⁹ *De Suikerbond* 1926: 5-8.

European management in sugar was obviously different in scale and training from that in other Java plantation industries. In 1920 the Moorman coffee estate, about the same area as a middle-sized sugar estate, employed only five Europeans: an Administrator, one Assistant in the factory and three in the fields. The Michiels-Arnold Java rubber and tea estates had similarly few Europeans in their local management, with some having a senior Native employee supervising the processing. There was a variety of previous educations among the Michiels-Arnold local European management extending from Wageningen or Deventer diplomas to none, and none were fixed requirements.⁵⁶⁰

Until the 1930s all the training courses in the Netherlands continued to operate, with some modifications. In spite of their increasing theoretical content those which had included a compulsory campaign in a sugar beet factory continued to require it.⁵⁶¹ The Syndicate also requested BENISO to press all the courses to include a language component. The BENISO debate indicated some doubts about the extent of effectiveness of this before arriving in Java but eventually supported the principle. The institutions had then added some basic language training: Delft and the Amsterdam Sugar School ((Malay, Javanese), Amsterdam Secondary Technical (adding Madurese to the existing Malay and Javanese), Deventer and Wageningen (both Javanese)).⁵⁶² In addition, indicating colonial assumptions and support of metropolitan superiority, in 1931 BENISO subsidised the founding of a new Chair in Sugar Cane Cultivation - at Wageningen not in the Indies.⁵⁶³

Some students training in the Netherlands had their costs and a living allowance paid by Java sugar factories. It is not known how many there were but it appears to

⁵⁶⁰ Moorman 1920; Bolder et al 1979: VI-VIII.

⁵⁶¹ In 1927, after some questioning of its value compared to spending time on more theoretical studies, the Amsterdam sugar course decided to keep the compulsory campaign but move it to the end after the Syndicate had discussed and voted for its importance.

⁵⁶² BENISO report 1927:10.

⁵⁶³ The founding professor was Dr J M Geerts, an ex-vice-director of the Java Research Station and ex-Agricultural Advisor of the NILM. ("Byzondere Leerstoel voor Suikerrietcultuur te Wageningen", *Archief* 1931: 1033]. The next year a committee of professors was set up for discussions with BENISO about courses and students.

have been only a few and to include sons of employees. Only three cases of paid students were found, all related to the independent *Tjomal*. One in the early 1920s at the Dordrecht Secondary Technical School and another in the late 1930s at the Deventer Colonial Agricultural School had fathers on the *Tjomal* staff. Another in the late 1920s, also at Dordrecht, had no apparent connection with, or informed knowledge about, the factory.⁵⁶⁴

As well as the Dutch-born ("*totok*") an unknown number of Indies-born stayed and studied in the Netherlands, and were encouraged to do so. A 1927 article in the Union paper commended the Deventer Colonial Agricultural School and suggested employees on leave should visit it and send their sons there. The writer proposed starting at about sixteen to seventeen in the basic diploma then continuing with the specialist sugar course and working a campaign or so before returning to a Java sugar factory at about twenty one.⁵⁶⁵

The Amsterdam Sugar School continued as a major provider of pre-service training. Its courses had been extended and ranged from one to about two and a half years, with exams supervised by representatives of BENISO and the sugar beet industry. It was convincingly claimed that its graduates had been very successful in the sugar industry. By 1929 it was reported that the great majority of the sixteen hundred students between 1893 and 1927 had found a continuing position in the Java sugar industry. In 1936 an ex-student, by then a "member of the management of the one of the well-known Java sugar companies", surveyed the present occupations of his eighteen class-mates and found a third were Administrators in Java, two others were in senior factory or field ranks there, several were in high positions in the Dutch, American and English sugar industries, and a third were untraced. Moreover, based on BENISO's lists of Administrators, it was claimed that in 1934 thirty five per cent of Administrators were ex-pupils of the Sugar School and the next year, after the strong

⁵⁶⁴ *Tjomal* archive, Inv. Nrs 127 [Item 28], 128 [item 7], 132 [Hofman and Scaf dossiers]).

⁵⁶⁵ *De Suikerbond* 1927: 51-4

reduction in numbers of working factories, thirty eight per cent were.⁵⁶⁶ Further investigation is needed to find the extent to which this was the course of choice among the sons of management.

These Netherlands courses stopped during the Depression. The subsidy to the Deventer Colonial Sugar Course was cut off after the 1932 course, although BENISO representatives continued to inspect and report on it before it completely stopped for a few years - as did the Amsterdam Sugar School course and the Amsterdam and Dordrecht Technical Schools' courses. They were restarted in 1938 and the subsidy was restored.

By the end of the 1920s there were more training opportunities in Java. A qualification as an Engineer could be gained at the Bandung Higher Technical Institute. Set up privately in 1920, this had been initially subsidised then taken over by the Government in 1924. Starting with eighteen students it had two hundred by 1938. Although its courses were officially equal in status to those at Delft there were claims that, in practice, "Delft-engineers" were still preferred.⁵⁶⁷ Also, a practical 3-year training in agricultural and forestry science, after Dutch-language lower secondary schooling, was provided at the government Secondary Agricultural School at Bandung. This was intended to provide for agricultural supervisors in general rather than specifically for work in the Java sugar industry. There were various student assistance schemes. There were no pressures to extend the Agricultural School training until after the German Occupation of the Netherlands in May 1940. In September 1940 a "Committee to prepare an Agricultural Science Faculty" was set up. In 1941 there was an official enquiry into the desirability of developing the School to university level, comparable to Wageningen, but "one still heard comments to the effect that little could be expected of such a plan since the mentality of the potential graduate Indonesians would not be suitable for positions of authority on the large estates".⁵⁶⁸

⁵⁶⁶ Quoted in Schnebbelié 1939: 102-3.

⁵⁶⁷ *ibid*: 344.

⁵⁶⁸ *Somobito: Communications about 1940*: 2; Van Doorn 1983: 21, citing material quoted in the appendices to the official report of the committee of enquiry.

Although the numbers of Native students in Java lower secondary schools increased absolutely and relatively, this was not the case in courses preferred for preservice preparation of factory staff. Reports, including in the *Indische Courant*, of results of successive year-grades of Dutch-language government trade courses and HBS exams show an over-representation of Chinese. However, most students had Dutch names.

In the mid-1930s, in response to a request for an opinion from the government, the IOB set up a committee on technical and trade education in the Indies, with the Syndicate Chair as the sugar representative. The committee proposed an expansion of this education with a new chemical-technical strand. The government approved this, the industry made detailed suggestions about the new course and it was started at the Queen Emma School in Surabaya in 1937.

Until the 1930s, inservice training and updating continued through the Union Surabaya Sugar School and the courses run by the Research Station. The latter, popular but very infrequent, were held in 1923, 1925 and 1926 with over a hundred attendees, including Administrators, Fabrication Chiefs, Chemists and, mainly, Field Employees. Then, a longer 11-day course was linked into a combined Agricultural Science-Chemistry-Technology course spread over most of a month with nearly two hundred attending. There was then a hiatus during the 1930s until another course, almost as large, in 1939.⁵⁶⁹ In 1931 the Union's Sugar School, which had been subsidised by the Syndicate which had one managing committee representative, was changed into a Sugar School jointly managed by both the Union and the Syndicate. It was to be run by a new "Sugar School" Foundation with a Management Committee of five members, two appointed by the Syndicate and three by the Union. However, due to a lack of demand as the crisis deepened, the 1931 courses and diploma exams were cancelled.⁵⁷⁰ They were not resurrected until 1940, after the cutting of any supply of

⁵⁶⁹ See the lecture notes for the 1926 course by Van der Kam 1926 and a description of all courses by Booberg 1940.

⁵⁷⁰ For new management and the cancellations see *Archief* 1931: 1152-5.

new trained Dutch staff by the German Occupation of the Netherlands. As mentioned, the Research Station's inservice provisions had also recommenced in 1939, as more confidence had returned to the industry.⁵⁷¹ This was to be shortlived.

P. SUMMARY: MANAGEMENT FALLS UNDER REGULATION

During the 1920s management was able to expand the industry with little change in itself. After the significant changes made in response to political and industrial challenges and described in the previous chapter, management's structure of collective, company and factory elements could effectively manage the technological and social relations involved. It was assisted by the institutional shelter and support of the colonial state which had become increasingly conscious of insecurity of its colonial possession and active in its defence. The collective representations of the sugar industry as being necessary for the welfare and development of Java were effective tools in its relations with the state.

However, this accepted importance became the key to the state taking increasing regulatory control over management during the 1930s. Demonstrating again that the basis for the industry's prosperity and contribution were beyond the power of its management, being in the hands of an international politics in which the Netherlands was a minor player, the industry nearly collapsed. As in response to previous crises, managements were generally unwilling to compete directly with each other. This preference for avoiding internal competition pushed the acceptance of a regulated collective standardisation as the solution to avoiding a complete collapse. This intensified the standardising and coordinating trends in management apparent through the 1920s. The government, to conserve as much as possible of the industry's contribution to the state and Native economy, effectively took over many of the crucial

⁵⁷¹ For the resurrection of courses at the end of the 1930s see *Archief* 1941-2: 72; *Somobito: Communications about 1940*: 4; Booberg 1940.

decisions that previously would have been taken by individual managements. Relatively fewer management decisions were made within the factories.

Management's disintegrating ability to construct a single collective representation provided government with even more authority to prescribe the options from which management could choose. With the government using the industry for its own purposes, the changing regulatory frame within which management was forced to operate demonstrated both the industry's continuing economic significance and also its decreasing power in the Indies and the Netherlands. The power of sugar industry management was based on the industry's economic significance to the Indies economy. It sold its product overseas and imported huge amounts of money which was spent on wages, rents, supplies and taxes, as well as sent to the Netherlands. As overseas sales diminished so did the industry's ability to pay locally, and so its economic significance, and consequently its managements' power, diminished.

The industry's management style supported the ethnic segmentation of the colonial society, embodying and facilitating it. Management was influenced by the interests acting in colonial politics and by the operating of a dual colonial labour market of recruitment and training. The Depression exposed the redundancy of the dynamic equilibrium that had been organised within the industry early in the previous decade. This included essentially colonial elements: a basic middle and lower management structure established and standardised by cooperative mutual consent of European interests; a limitation of potential Native challenges underpinned by government defence of colonial supremacy; and a continuation of patterns of training, recruitment and employment of management personnel which demonstrated the limitations of colonial assumptions and associated ethnicised interests.

Chapter 5 SUMMARY AND ANALYSIS

A. INTRODUCTION

This thesis has investigated the management of the Java sugar industry from the establishing of its modern company period in the late nineteenth century through to its traumatic 1930s, the final half dozen decades of its existence. During those decades this world export industry was transformed by massive expansion in scale and the use of new industrial and agricultural scientific technologies.

This account examines the industry during the last stage of colonial rule by the Dutch in what many of them considered to be their East Indies. Their sense of possession included ideological assumptions among them that "Dutch", unlike other non-Native ethnicities, was not foreign to the Dutch East Indies. This applied to business capital interests, and extended to personal mixtures of Dutch and Indonesian lineages. My study provides some of the missing details of the industry's management through this hitherto largely unexplored period, and uses these details to question some of the conventional assumptions about the changes in management style. This final chapter will summarise the findings of the investigation in terms of the organisation and personnel of that management.

As well as continual incremental changes there were three main periods of transition in the organisation and personnel of Java sugar industry management during these decades. All occurred largely in response to external demands: the international commercial and technical competition which struck the Java sugar industry in the mid-1880s; the increasing political and economic challenges, mainly accelerated by the First World War; and finally the international Great Depression and the unforeseen world politics of trade during the 1930s. Responses to the first, commercial, collation of crises included the change from ownership by individuals to companies, the massive intrusion of the financing organisations, and the formation of collective research

centres and a central organisation to represent management in the forum of stakeholders. Responses to the second crisis, of collective representation, included upper managements in the Netherlands organising a new collective body to represent their general interests, the domination of this group over the existing middle management collective representation in Java and its creation of a new collective sales organisation, followed by the establishment of yet another collective body to represent employers in the new arena of industrial relations. The third crisis, of government regulation, forced the industry to accept much increased government control of management in its fields and factories.

By the beginning of the 1880s, metropolitan finance capital was supporting the sugar factories. At that time these factories could be separated into two categories. The minority were the completely private land-renting, labour-hiring and free sales-market factories, established mainly after 1870, or even earlier in the Principalities where some compulsory labour continued in use for several decades. The largest group were the older ex-Cultivation System factories. These had been originally established before the mid-1850s with government loans. They processed government-organised cane grown on government-organised land to fulfill both government and free sugar contracts. After 1870 they marketed their sugar themselves and paid the government for cane supply and, from 1878, were moving steadily into the same free land and labour market system the fully private factories had always operated in; a move completed by 1891. In general, factories were expected to be sound investments in a growing export industry with a history of stable and secure profits. However, these expectations were short-lived and the financing companies, the so-called plantation banks, had to provide further major capital injections as well, in some cases having to refinance themselves. Over the next two decades, initially by default but gradually by design, these finance companies' finance capitalism was supplemented or replaced by industrial capitalism as they began to make profits directly from the capital invested in the factories they came to own and build. By the twentieth century these operating profits had become foreseeably secure. After severe worries due to World War I and

the optimism of a post-war spike, they continued into the mid-1920s, then their profits slowly declined before collapsing into operating losses from the beginning of the 1930s. After massive losses and writings-off of invested capital, moderate profits started to reappear beyond the mid-1930s trough.

Before considering the structure and personnel of management, a major point about its scope must be emphasised. However powerful it appeared to the local people in Java, management normally accepted an essential impotence related to the international market for its sole product, a standardised bulk commodity. No serious systemic attempts were ever made to control or extend sales along chains of distribution beyond the harbours of Java. Management, by choice, controlled only the industrialised process of production. In general management in the Java sugar industry restricted itself to mass production, not extending to marketing and distribution.

These restrictions came from an acceptance of several elements of the peculiar nature of the Dutch colonial system. The relatively few people in the Netherlands did not provide a metropolitan consumer market sufficient to take the products of its giant colony. Its capitalist colonial interests were not powerful enough in the home economy to prevent the Netherlands market from being supplied mostly by its own protected beet sugar industry. This condition prevailed until the relatively small imports subsidised by the Dutch government from 1936, apparently more of a charitable assistance package to its colony than a significant break-through of colonial capital. Dutch military and economic influence was insufficient to deter any other countries from imposing new protective measures or encourage them to lower their existing obstacles to imports from Java. Some limited financing by British and, later, Japanese sugar traders supported a few factories. Apart from this, no significant capital or labour was put into the industry from countries other than the Netherlands and Java itself. Thus no directly significant commercial interests were developed from behind others' tariff and protection defences that could have helped Java sugar to enter their consumption markets. During all these decades how much Java sugar could be sold

and at what price continued to depend on other countries' domestic and international decisions.

This period of the industry in colonised Java began during the early stages of industrial modernisation in the colonising Netherlands. At the start, new technology and technical skills were imported from other European countries. By the end, Dutch industrialisation had matured and could supply both technology and skills.

Industrialisation in the Indies was started with a strong contribution from the machinery and transport needs of the sugar industry but, crucial to management, the colony was still unable to provide enough of the technically trained personnel who would start near the bottom and move up to the higher ranks of the industry's management.

B. THE CHANGES FROM PERSONAL TO COMPANY OWNERSHIP AND FROM FAMILY TO PROFESSIONAL MANAGEMENT WERE NOT HOMOGENOUS, WERE NOT RAPID AND WERE OFTEN COMPLICATED

After the 1884 crisis there was an almost complete change in form of ownership from personal to corporate. There were several examples that show this change was the mechanism by which financiers obtained part or full ownership of indebted factories through the legal and accounting practice of transferring ownership of shares.

However, in many cases what was done was only a change in form rather of actual owners. Moreover, in contrast with conventional accounts, this change was not a rapid conversion of this level of management into a new stage but was made gradually over two decades, mainly during the second decade after the crisis. This applied to both the management moves as major financing companies became owning or managing companies and to the corporatisation of the upper management of the factories which remained independent.

Before this period of change most factories had been founded by individuals and been in personal then in family-company ownership. For largely financial reasons the shares of several were partly or fully transferred to ownership by non-family companies and, as more factories were founded by non-family companies, upper management by original owning families proportionally decreased. As the number of office-holders involved in corporate upper management increased and representatives of financing interests were included, the proportion appointed as family representatives decreased. As office-holders with technical expertise and experience in factory management were appointed and time passed, the proportion of family members who had chosen to work directly in sugar factories decreased with each successive generation. Their representation was delegated to men with the necessary background or to others, including family members, with legal and business expertise.

The great majority of owning companies, and consequently their upper management, were originally established in or moved to the Netherlands. Upper-middle and middle management, on the other hand, stayed or was evolved in Java. A remarkable feature of the evolution of the companies was the similarity between their middle and lower managements (see later) but the differences among upper managements. The single pattern of the former contrasted strikingly with the variety in upper management of larger owning companies which directed their own groups of factories and possibly managed factories belonging to others. Small owning companies might direct their one or two factories, delegate management to another owning or managing company, or delegate to an individual who directed several factories.

The decisions of the upper level of management depended on the information, advice and, in many areas, the decisions sent up from the hierarchies of management below them. This was partly because of distance. The occasional return trip made for a personal inspection by a Director or Board Member would take a minimum of a month each way for the voyage.

Most companies were small, owning one or two factories and had only a few, part-time members of upper management: a Director and Board Members, and

probably a Secretary. The upper-middle management above the factory Administrator in Java was likely to be delegated on a fee and profit share basis, either to a specialised management company or to a local agency of the large financing, owning and managing companies who provided the financing advances on the security of consignment contracts.

In contrast a few owning companies were large. The most obvious were the half dozen companies that had evolved from the initial plantation financiers into varied combinations of finance and industrial capitalists also owning and operating the factories which they had taken over or built. Among these, the Amsterdam Trading Society (HVA) stood out in its evolution into an expansionary single-purpose agri-industrial business company owning all the factories it operated, mostly in two planned and integrated clusters on Java. The others were evolved differently. They were mainly mixtures of completely and partly owned factories, directly managed and less directly influenced. The opposite extreme to the HVA was the Rotterdam International Credit and Trading Society (Internatio) which managed several factories but owned none of them.

After the initial couple of decades of building, enlarging and modernising there was widespread continuation of enlargement, improvement and replacement, but few completely new factories were built by any major company other than the HVA. Other large combinations were evolved in different forms. As a response to the 1884 financing crisis the Netherlands-Indies Trading Bank (NIHB) had set up the Netherlands-Indies Agricultural Company (NILM) to handle its newly acquired plantation interests. These included an indebted collection of five existing factories for which a further new operating company was established, the Java Plantation Company (JCM), which thereafter built only one more. Eschauzier family members gradually accumulated ownership of ten factories and, even more gradually over decades, consolidated this ownership and management into a single umbrella company. The owner of the Oei Tiong Ham Concern acquired five factories as a major part of an integrated business conglomerate including sugar trading and shipping, mainly

managed in Java. In contrast, the other continuing Java-based companies that had owned more than one or two factories, for example, the Ament, Dezentjé or ETTY families and those under Lie Djing Han, remained at more or less the same scale and scope as at their establishment from personal family ownership early in the period. Other cases of gradually expanding management scope occurred, not through common ownership but through common Directorates and Board memberships that involved a handful of men in the Netherlands holding upper management positions across several companies.

The evolution of upper-middle management above the Administrator of each factory was in some ways a clear evolution towards larger combinations. In other ways it was more complicated. As well cases where owners employed executive Directors and delegated upper management to them, there were many cases of upper management contracting out the levels of management below them. Overall, the separate Netherlands-seated owning companies came to be managed in groups at upper-middle level by their own Java agencies or by managing companies which were delegated to represent them in Java. This layer of upper-middle management confuses the analysis of the management of the owning companies. It raises questions about whether the management of these delegated management companies should be classed as management personnel of the *owning companies* or whether the factory management were personnel of the *management companies*. In the cases of the large companies which using their own Java agencies to manage their own factories both answers would clearly be yes, but when they also provided management services to factories owned by others the relations become more opaque. When the services include providing factory staff, superintendence and technical advisors as well as clerical-administrative functions, classifying factories as being managed by the management companies rather than their owning companies needs extensive investigation and analysis.

Family interests in the management of many factories continued as management style evolved, but in changed forms. Some families lost their ownership rights to

financiers, others shared theirs. Some delegated upper management of their factories entirely to professional managers, often previously middle management ex-Administrators, others maintained a family role in the professionalised management. The continuation of family members as Directors or Board members was too common to be considered exceptional. This occurred mainly in small companies, but most companies were small and also family involvement was practiced in larger companies. It should be pointed out that, although the same European family names recur in factory employment lists, further and different, research is needed to establish how far this indicates networks of families working in sugar at the lower management levels. This also applies to the relatively few with Chinese family names.

Distinctions between the interests of owners and salaried employees were blurred by the wide-spread importance of profit sharing. Although a company's profit-sharing employees and dividend-sharing owners had different relationships with it, their interests in maximising its profits overlapped. This applied particularly to those managers, from upper management down to Administrators, who could derive a large proportion or the great majority of their incomes from assigned profit shares. Between the unprofitable years in the late nineteenth century and the loss-making 1930s ownership paid well, in many years extremely well, especially in the light of the limited effort required in what, for many, were largely inherited entitlements. Upper management, overlapping with private or institutional share ownership, also recompensed itself amply from profits. The executive Directors were individually paid about as much as the more passive Board Members were paid collectively. Upper-middle management positions of Superintendents and Advisers benefitted from the general expectation that their wage and profit-share incomes should be above those of the Administrators of the factories who were below them in the management hierarchies, and whose profit shares would be roughly as much as the total for all those below them.

Given the continuation of various family involvements in management and the importance of profit shares in employment conditions, simple and universal assertions

about "family" or "professional" business management and "family" or "managerial" capitalism do not adequately explain the evolution of the industry. Effective differentiation between positions of employed upper management and family owners was blurred in several ways. One was the widespread presence of members of owning and related families among those employed to provide upper management. Another was the evolution of *management* families with successive generations or otherwise related men taking upper management positions in the larger companies or across smaller ones. In both situations these family members were professional managers, deriving income and authority from their appointed positions irrespective of whether they were also share owners.

This practice was more obvious among upper management levels with only some cases among middle managers, normally noticeable as Administrators from owning families. Nevertheless, there would have been a number of family members moving up towards a family-factory Administrator's position as, at least by the twentieth century, Administrators would have been expected to have worked at lower levels before their appointment. A scattering of employees with the same name as owning families were noted but what, if any, relationships were involved is not known. Moreover, other relations with different family-names would have been missed in this observation. The Dezentjé company in Java was exceptional among European companies in that a significant proportion of the middle and lower management in its factories were members of the owning family.

It seems at least dubious to make a hard and fast distinction between "family" and "professional" managements as many of the professional managers were members of owning families acting as upper managers of the companies of their, or others', factories. Further complications would be added if a reality were recognised and "family" extended to include close family friends.

The theorised distinction between "professional" and "family" is based on a distinction between appointments made only on an impersonal assessment of expertise and those in which what is considered to be adequate expertise is supplemented by a

personal connection, rather than between appointing someone either on the basis of expertise or only on a close personal connection with no necessary expertise. In practice, many people at this time would have had effectively "family" connections with people not in their legal family, possibly more than with some legal members of their family. It seems unjustifiable without further research to make assumptions about an absolute distinction in practice between relationships with all legal family members and with non-members, or to draw fixed, generalisable boundaries at which extended family relationships can be defined as shifting from "family" to "non-family".

Nevertheless, a majority of Directors were not owners and probably the majority of owning families delegated the upper management of their companies, and the associated fees and profit-shares, to more expert non-family managers. Further mixtures of managers and owners were added by the ownership *and* management of a large minority of factories by large Netherlands financing companies and the delegation of management of many others to them or to purely management companies in Java. The situation was further compounded by representatives of financing companies who were also well represented on Boards, and by some of them being also owner representatives if the owning companies were also the major financing companies. Some financing companies also involved family relationships.

"Family capitalism" and "management capitalism", as with "family management" and "professional management", may be useful ideal-types, diagnostic tools for analytic purposes. However, in the companies of the Java sugar industry they were not clearly differentiable categories apart from the extreme cases where upper management included no members of an owning family and cases where it was dominated by them.

Moreover, the relative competitive success of even these extremes was not firmly associated with any particular form, apart from the evidence that companies that failed and were taken over, were usually family-managed. However, this mainly occurred in the early stage of the late nineteenth century expansion of enterprises and involved only a handful of individual or family owners having their apparently

irretrievable debts exchanged for part or full equity in the shares of their factories by their financing companies. Several disappeared completely, particularly those previously owned by local Chinese. The majority of other family-owned companies continued and prospered, including the Chinese. The collapse of several companies in the early stages of the Depression was not clearly associated with family ownership or management, but apparently related to access to risk capital to cover their operating losses.

At a subsequent stage the closure of several companies was based on their selling their allocated production quotas. This was an upper management-calculated preference to buying other factories' quotas or continuing to operate at the much decreased, less profitable or loss-making, scale forced on them by the government's "proportionally equal reduction" regulations. These decisions were not apparently related to the presence or otherwise of owning-family members among their upper management but to technical operating calculations. There was a similar lack of apparent association between continuation and family or non-family ownership of companies.

Overall, about the only justified simple claim about family management is that it needed to become professional and expert. Given the options of delegating much of the middle management to professional management companies the expertise required could range from being skilled enough to exercise detailed and active production control to being able to discern and accept the useful recommendations made by others. More investigation is needed before the degrees of family involvement, between the extreme of a completely family-dominated upper management in which at least most office-holders were family members and the other where a token family member sat relatively passively among non-family employed professionals can be clarified. Moreover, further investigation into family networks is necessary to illuminate whether seemingly non-family office-holders appointed on the basis of their technical expertise experience, such as an Administrator, or were appointed because they represented financing interests, were also members of extended families. The long

history of inter-marriages within the small Indies European business and government circles and the marriages of future Administrators into owning families provided for a wider network of potential family networks than overtly shown by shared family names.

Similarly limited claims can be made about family capitalism. Families had to continue to be given adequate finance to operate its factories. This depended on financiers' assessments of future prospects of profitability, in turn based on the quantitative reports of management and predictions of the market, rather than on family matters.

An area of upper management which could fruitfully be further researched is that of deliberate cost-inefficiency. Chandler pointed out that expansions of companies by take-overs and absorption can be a rational way of increasing cost-efficiency, by reducing the costs of external transactions between separate companies to those of internal ones between units of a single company. In the Java sugar industry examples of this can be seen among the expansions of major companies, particularly when expansion took the form of integrating neighbouring factory-planting organisations into larger operating units, or occurred as a response to financial pressures in a group of closely related but separate companies. However, inefficient costs against some people's interests can provide rewarding benefits to others. Maintaining a separate upper management meant paying fees and profit shares to its office-holders and external financing fees and interest to finance providers - at a possible loss to shareholders. There were cases of delaying the eventual uniting of related companies into a single one. There were also cases where shares of a small owning company were acquired by one of the larger companies, but its operations were not fully absorbed nor its management internalised. The upper management positions were then personally held by members of the upper management of the acquiring company. In other cases the positions were delegated to the acquiring company itself rather than its Directors personally. Further investigations of potential benefits taken directly by individuals or transferred along family or other networks into associated financing and management

companies by *not* reducing transaction costs to a minimum could be illuminating about the practices of management.

C. RELATIONS BETWEEN COMPANIES WERE RESTRAINED AND NON-COMPETITIVE

The two clear trends of expansion in the industry were limited in scope. The scale of the individual factory-field production units was greatly increased and there was a continual trend to larger combinations of these units through companies or individuals at the upper management levels. Nevertheless, these combinations never attained monopolising or oligopolising powers. Neither, in general, did they extend their scope of activity into with backward or forward linkages, into increased vertical integration of management over supply or over distribution and marketing respectively. Earlier, there had been some backward linkages into factories renting cane fields to provide raw materials for themselves but these had been innate to the new private factory-field combinations established before the 1880s or were made during the 1880s as the Cultivation System was replaced.

Although there was a remarkable variety among the forms of their upper managements, this variety did not appear to produce an environment in which potential advantage was gained by any particular form. The major managing companies were spread completely from being the owners of all the factories they managed, to owning none. The HVA, the Oei Tiong Ham company, the successive Eschauzier companies and the Klaten Plantation Company/Mirandolle, Voûte & Co combination were at one extreme, Internatio and the Indies management companies Kooy & Co, Tiedeman & Van Kerchem, Anemaet & Co, Coster Van Voorhout & Co at the other. The NHM, NILM and the Principalities Plantation Company managed a mixture of their own and others' factories. Consequently only a handful of the companies had their commercial interests restricted to the profitability of the few factories they owned. For others

there was a spread across a wider variety of factories. An unrestrained "war of all against all" would not be an advantage to anyone if the Java industry collapsed totally or in such turmoil that its continuing reliability to export markets was destroyed. The mixtures of shorter and longer term commercial interests in future dividends, fees and profit-shares, and of being able to operate in the continuing structure of an industry, made upper managements of the large companies wary about unrestricted open competition for survival. No single company was close to holding such a dominating position in the existing market that it could expect to be able to take on its competitors by force of position. Similarly there was not a near oligopoly in which alliances could be rearranged to take over supremacy. Apparently no alliances between any combinations of the large companies were proposed.

In general, the evolution of the sugar production companies led to an openness and a non-competing balance between the larger and smaller, which stabilised in their relations by the 1920s. A remarkable characteristic of the industry was the transparency of its operations. As well as the information flows through the individual companies, the whole industry comprised an information flow system. There was an openness about potentially valuable technological and trade information which continued until the last stage of international competition. However, from the late 1920s discussions about "intellectual export restrictions" were followed by their implementation. First the export of newly developed seedlings was banned. Then came the closer security applied to new scientific reports from the industry's collective Research Station. They were circulated "on loan" only to the Station's membership. As only those operating factories within the Java industry could be members, this was a remarkable restriction when compared to the previous availability of the reports to any subscriber to the *Archief*, the industry's journal, which had reprinted all the Station's research communications.

The form of regulation of land-leasing, which involved a factory gaining exclusive rights to lease within prescribed boundaries, meant that direct competition for land was restricted mostly to competitive bidding for the allocation by the

government of newly opened land, either to add to existing allocations or to build new factories. The possibilities for land competition were limited, because each factory could use cane grown only within government-set boundaries and also because existing factories were given priority in leasing new areas and symbiotically paying for the new irrigation schemes which they and government-protected local populations would use.

Few factories changed hands. In the two decades after 1884 there was a "spend and modernise or close" stage in which a small number of factories disappeared. The usual reason for one company taking over another's factory was a financier acquiring a pessimistically indebted client. This was done before the 1930s when it was possible to be optimistic about a future profitability of a factory. It was foreseeable that, after its otherwise non-repayable debt to its financier had been written off by being converted into equity for the financier, there could be subsequent dividends. For different reasons, take-overs also occurred in the middle and late 1930s. In several cases the ownership shares in a loss-making factory considered to have no future prospects of profitable operations would be transferred to its financing company, which at least reduced the accumulated debt, and the financing company would then arrange its liquidation. In other cases the government-allocated production share, equivalent to a planting quota, of a factory would be sold to the owners of another and the factory itself closed.

However, before the regulated rationalisation of the 1930s, factories were usually closed for the purpose of consolidation into fewer but larger processing units with neighbours. In some cases they were already under common ownership, in others, factories were bought with that consolidating intent. A similar reason was to build up local complexes that could be integrated into larger operating units. Examples included the HVA extending its complexes of integrated factories and fields by appropriate take-overs, the NHM's taking similar but smaller steps with a North Coast complex, and the Eschauzier company's accumulations around Modjokerto. Given the regulatory restrictions on planting expansions, for much of the period advantageous use of increased processing capacity could come only from either gaining permission to use

newly irrigated land or from buying the existing planting rights of a neighbouring factory. Without increases in planted area the gradual early twentieth century increases in yield per hectare did not, by itself, provide enough extra cane to justify enlarging processing. However, the rapid spread of the new variety POJ 2878 in the late 1920s did. This led to new purchases of equipment with higher capacity and stronger mills for existing milling facilities to cope with the harder cane, while the building of one of the three new factories by the HVA at that time was to mill the extra cane from plantings of factories in its existing local complex.

Although continually active in international competition, the companies did not attempt to establish individual dominance in the market but tended to move in the opposite direction, towards collective arrangements to restrict competition between them. Examples of this were the arranging of sales through the VJSP and NIVAS, industrial negotiations with European employees through the JSWB, and in the avoiding of enforced production reductions. Responding to the government's moves towards a short-term halving of production in the early 1930s then towards consolidation and stabilisation of a longer-term reduction from 1936, the industry set up formal representation of management covering the full range. Negotiations concluded that all companies should be equally restricted, apart from some supplements for the two quite different conditions of weaknesses in particular factories and localities. One supplement was given to the smallest companies operating only individual factories and thus rendered unable to transfer production quotas internally. The other was for factories situated in the economically weakest regions where the local population would be most damaged by losing income from the sugar industry.

At first sight the collective funding and management of collective applied research seems to contrast with the industry's usual anti-competitive tendency. However, the problems the Research Station investigated and the support it provided to factories were usually generally applicable. Its centralised research was usually more cost-effective than relying on the more limited private work possible at individual companies, and the results were available to all. Nevertheless, it is worth noting that

the Station's more generally applicable agricultural research continued to be more highly valued by larger companies. At least some of its research into technical and chemical areas could be carried out in more relevantly focussed ways across the factories they owned and/or managed themselves.

Patterns in the development of the Java sugar industry businesses do not obviously fit Chandler's model of competition. The largest companies did not move towards taking over major rivals or any significant number of the small companies which were independent or associated with other large companies. No company attempted or approached a monopolistic position, and there were too many large companies to convincingly claim there was a commanding oligopolistic situation. The companies' evolution did not follow a path of increasing scale and scope in competition with each other. They increased the scale of their operations by enlarging their planting and factories. A small proportion expanded horizontally by setting up new or, more usually, taking over existing factories. However, the latter was more frequently done by financiers acquiring indebted factories than by one company purchasing a profitable factory from another, usually to expand an existing complex. The only significant example of a shift from association from one major company to another was in 1931 when a group of owning companies under a common Director had its financing and managing functions because of a disagreement over accepting the voluntary export restrictions of the international Chadbourne Plan. There were no cases of companies expanding into the sugar industries of other countries.

With the exception of the Java-based Oei Tiong Ham concern the companies' scope of operations was generally not increased either backwards or forwards, with increased vertical integration into management control over raw materials or into further processing, marketing and distribution. The OTH concern was also expanded horizontally to successfully evolve its scale and scope into a unique multi-unit family-owned and directed conglomerate. In other companies those plantations and trading operations either previously existed or added were largely or entirely operated independently of the sugar operations. Exceptions to the latter included the HVA's

flour and fibre plantations among its sugar operations around Paree, and the Klaten Plantation Company's neighbouring tobacco and sugar estates in the Principalities. Overall in the Java industry, the backwards integration into growing had been occurring at least as far back as the beginning of this period in the 1880s. Integration was improved by the increasing scale, technological expertise and detail involved but was not created nor had its extent changed during the period. The companies did not set up or acquire their own machine factories, new trading or other supply companies. The HVA dropped its original trading operations, Internatio continued to import fertiliser, the NHM's widespread banking and plantation interests were also continuing activities, the Colonial Bank and the NILM appear to have had only local Board and possibly financing connections with the Braat machine factory, Fraser Eaton continued its sugar exporting and managing operations.

The evolution of companies in the Java sugar industry differed from those cases embodying mass production and mass distribution discussed by Chandler. They concentrated on improving control over their continuous-process manufacturing and its integration with their agricultural production, but deliberately did not develop any distribution and marketing divisions.

D. THE LATE COLONIAL SYMBIOSIS OF MANAGEMENT AND STATE WAS CHANGED AS THE INDUSTRY WEAKENED

Only in the last decade of the nineteenth century did the Dutch government move towards treating its Indies colony as an area that should not only be exploited for the sake of the metropolitan population, but also be developed for the sake of its own inhabitants. At the turn of the century this attitude change was enacted in its overt commitment to the developmental Ethical Programme. The change followed the technological modernisation of the Netherlands and, by extension, the more

generalised application of the latest Western transportation and industrial mechanisation into the commercial exploitation of its agricultural colony.

The continuation of some measures to protect Native economic and cultural interests, the introduction of some relatively limited educational provisions, the loosening of political censorship around the turn of the century and the subsequent establishment of the widely representative Peoples' Council all had implications for the management of the sugar industry. In general, these publicised representations of the industry and its activities that challenged those of its management, and raised ethnicised competition between employees (see below).

As the developmental directions of the Dutch and Indies governments included agriculture and health, a symbiosis of state and sugar company interests provided the extension of irrigation and some health services partly or fully paid for by sugar companies for joint use by their operations and the local populations. As the Indies government needed larger incomes to pay for the wider functions it had taken on, the sugar industry had a vital part in its revenue raising. The collective management of the industry carefully calculated and publicised this seeming socio-economic benefit.

The local state, following changing European ideas about the role of a modern state, gradually intervened further into Indies colonial society with regulations about transport, safety, "social legislation", and a willingness to intervene in industrial relations on the side of employees. All these restricted management's prior freedom from considering the needs of other interests, by adding state authority to those, such as employees, who were weaker than management. The increasing institutional density of the colonial state involved an increase in the variety of necessary interactions between middle management personnel and government officials. Increasing tension between the colonial state and elements of its colonised population provided further symbioses between state and industry interests. The industry transferred large proportions of the overseas income it derived from export sales into local economies, making locally crucial payments for wages, rent and supplies. The state's political control prevented the disruption of the industry's activities from the influence of what

could be defined as political activities. More locally-initiated damage to industry property through burnings and theft were partly guarded against by local state officials and normal police and partly by the factories providing special police forces.

The shift to greater autonomy by the colonial government in the Indies was associated with the shift in relations between sugar management and state in the response to the Depression. The setting up in the Indies of the compulsory single seller NIVAS occurred about a decade and a half after upper management rejected a similar scheme in favour of the Netherlands-established VJSP. The subsequent debate and mid-1930s regulations that enforced the halving of the Java industry's production, were basically activities of the government *in Java*. Earlier in the 1930s it had been demonstrated that the sugar industry was too important in the economy and taxation of Java for the government to allow its management to unilaterally decide to clear the unsold stock-pile by stopping production. The government used the regulatory powers it had recently granted itself to threaten companies which, in its opinion, did not plant and process enough. The companies were used by the late colonial government for its own ends by directing more money into local economies and into its own revenue, even at the cost of increasing losses to the companies. This was possible only because upper management was optimistic about a profitable future. In what was to be the final decade of its full existence, the colonial state demonstrated what had become the essence of its colonial relationship with the management of the colonial sugar industry.

E. ETHNICITY, THE CULTURE OF MANAGEMENT AND THE COLONIAL DUAL LABOUR MARKET INTERACTED IN THE ETHNIC SEGMENTATION OF MANAGEMENT

During these decades, increasing during the twentieth century, the sugar industry's ownership, management and representation became more uncontroversibly European. This was strongly and deliberately linked with the ethnic segmenting and polarising of

the colonial Indies society by those identifying with both sides of the main colonial division. This had implications for its management during the late colonial period. It probably also fatally undermined any longer-term maintenance of that management after the achievement of independence from colonial rule.

Although only a fraction of a per cent of the population of Java were classified as European and only a few per cent as Chinese, the overwhelming majority of the Java sugar industry was *owned* by Europeans and most of the rest by Chinese. The only Native ownership continued to be that of the Solo Mangkunegoro princely dynasty which used normal European management for its two factories. Japanese ownership was small, late, and mostly short-lasting.

Only a small minority of factories stayed with upper management based in local Indies families. Apart from the Oei Tiong Ham factories, these survivors were mostly in long-standing Indies-European hands. Several other local Chinese family-ownerships reached but did not survive the early 1930s. During the first stage of changing scale and management from the 1880s the proportion of Chinese ownership dropped through closures and take-overs by Europeans. There was a similar drop in the early years of the Depression, including most of the handful with significant number of Chinese management employees. In contrast, the evolution of the Oei Tiong Ham company maintained a visibility of non-European ownership and upper management, but with only a very small number of European-trained Chinese middle and lower management in its factories. Numerically most Chinese involvement was in non-management positions. Educated Chinese office employees worked in other factories but the most obvious were the specialist juice processing teams that stayed at factories only during their campaigns.

Almost all management above the level of foreman remained European. The great majority of Europeans in factory and field management were Indies-born, but it would be a distortion to claim simply that the senior levels were filled by Dutch-born and the lower ranks by Indo-Europeans. It is true that the lower categories were

dominated by Indies-born, but there were usually also as many of them as of the more qualified and rapidly promoted Dutch immigrants in the middle and most senior ranks.

The culture of management was mainly a limited, yet pervasively instrumentalist, one of diligent application and progress in material production. It remained hierarchical and authoritarian, with a conservative-evolutionary ideology, normally assuming there would always be new and better methodologies coming, but adopting them only after careful testing. The business of management was focussed on production, technical expertise, quantitative measurement and records.

By the late nineteenth century there were long-standing colonialist ideological assumptions about ethnicity, with a relative valuing of "European" over "Native" ways of culture, technology and character. Particularly relevant to the management of the sugar industry were the acceptance that all technological progress would be a product of endeavour managed by Europeans, and that the most important personal characteristics of lower and middle management were trustworthiness, authority and persistence in "European" occupations. Representations of ethnicity, including ethnic relations, became in some ways both more formalised but contested, as trained skills became more important.

The companies stayed largely and willingly dependent on European technical training as the prerequisite for employment in lower, then rising to middle management, positions. Initially management required little or no specialised training. Until late in the nineteenth century the industry relied on other than Dutch technology and education. However, there was then a relatively rapid response in the Netherlands to increased calls for more training for the sugar industry, as part of the wider Dutch industrial development. The newly instituted and expanded training was not only for the colonial sugar cane industry but also for the domestic sugar beet industry. Technical education was started and developed in the Netherlands over about two to three decades, with the founding of several institutions which then repeatedly raised the level of the training they provided. Their developments were not matched in the Indies. Over the same period, training was developed in Java but remained limited in scale and

intensity despite the spread of elementary education, some limited trade and agricultural schooling, and the founding of the first engineering college.

The Netherlands training was pre-service and did not entitle its diplomates to higher sugar management ranks on initial employment, but facilitated faster promotion. The Indies training came to include pre-service trade and book-keeping in the handful of state institutions. Importantly, some short formal in-service and informal courses and opportunities were also evolved. The formal were first provided from the early twentieth century by small private interests then, more than a decade later, by the larger union-run and management-subsidised sugar school. The informal were provided by the industry's collective research institution. Being inservice, these provisions were available only for those already employed in European employee positions.

The colonial dual labour market was the basis of the colonial ethnic segmentation in the business culture of the companies.⁵⁷² The assumptions in the companies' culture about categories of ethnicity was increasingly dependent on the extent to which categorisable identities were perceived as having become "European". This was largely a matter of training and of character, in particular diligence and trustworthiness. Many Indo-Europeans had been defined as sufficiently European and were employed in the industry's relatively uneducated middle and lower management in the nineteenth century. In the twentieth century, many more were schooled and accepted into the European, thus more costly. As more training was available more became requirable.

By the 1910s the expansions of the office and supervisory positions of a modern economy had provided a relatively newly achieved prosperity and apparent security at "European" levels for large numbers of Indo-Europeans with elementary schooling in the colonial Indies. This situation did not last long. By the twenties the

⁵⁷² "Colonial dual labour market" here refers to the presence of two interacting labour markets in the Indies, one based in metropolitan Netherlands, the other locally - thus with a different meaning to Boeke's "dual labour market" of a modern and a traditional economy coexisting in a single society. "Colonial ethnic segmentation" refers to only the "European"- "Native" segmentation, not to that of the "Chinese" which had more opacity and European suspicion involved.

position was threatened by the Ethical Program of the colonial government having expanded Dutch-language schooling, bringing many more similarly schooled Natives into the market. They were increasingly difficult to differentiate from a large proportion of the Indo-European population on the basis of skills learnt from their common schooling. Added to the political culture were the questionings and challengings of the Native Movement undermining previous colonialist assumptions of ethnic precedence. Any continuing assumptions that Europeans and Natives had innately different life styles and so needed correspondingly different wages, gave European labour without special skills a large price disadvantage.

The great majority of the tiny caste of Europeans were Indies-born, usually Indo-European. They saw their own and their families' futures in the Indies so they logically looked for a continuation of the ethnic segmentation and privilege for those identified as European. The political leaders of these "stayers", in the Indies European Union (IEV) and the unions for European employees, articulated and publicised their demands for maintenance of the racialised segmentation of Indies society. This was clearly enacted in the lower and middle management of the sugar industry where, after internal disputes, the dominant opinions in the mainly Indo-European union of European personnel rejected the possibility of association with Native personnel as they believed their long term interests were too dissimilar, even conflicting. This was not a relevant threat for those whose initial recruitment into the bottom of the factory ladders had been based on formal technical qualifications, and who had won subsequent permanence and promotion from approved performance in occupations generally requiring the qualification. Thus it was of little direct career relevance to the Dutch-born expatriates. However, it was crucial for those with little or no training, entering low-level management occupations supervising Native labour in field or store. This work required few trained skills but mainly personal attributes of trustworthy diligence, reliability and a willingness to demand work from other employees. Future career advancement was then based on gradually acquiring more technical knowledge, skills and reputation. Many Natives had sufficient schooling, and many more had been

working in the industry for many years in foreman and artisan positions. They would have been capable of carrying out at least the lowest management duties. The short-term positions supervising cutting and transporting cane during the campaign were usually filled by Indo-Europeans. If a Native with years' work as a field foreman had been put into one of these, it could have provided him with entry experience for the permanent low-level field positions. However, this would have undermined the assumption that only Europeans had the necessary character to carry out the responsibilities. It would also have blocked the trajectory followed by some Indies-born Europeans into the field positions from weighbridge and store supervision, where they had been assisted by Native or Chinese weighbridge or store clerks. Even some of the Europeans themselves had been clerks in the office or elsewhere. For them the threat of possible, and cheaper, non-European competition would have been obvious.

Faced with these ethnicised self-interests, the more radical socialist ideology prioritising class over ethnic solidarity was defeated. Related to this was a rejection of upper management proposals to differentiate their positions into two classes, based on trained competencies and future promotion potential. This change was seen as allowing the breaking down of the previously assumed barrier against Native competitors. Training was also strongly advocated, which produced an associated feeling of threat among those who were already employed but had little or no prior training and little or no opportunity to obtain any more in the Indies. Both the rejections of the ideology and the proposals were intended to reinforce ethnic segmentation. This tendency among lower and middle level management staff was reinforced by the noticeable involvements by some middle and upper-middle management employees with the more colonially conservative and racially conscious Fatherland Club party, which shared most of the public political representation of "European interests" with the Indo-European Union in the thirties. Therefore, the pool from which management personnel could be drawn was of only those identified as European.

As well as challenges to the employment future of the Indies-European management staff by the large and increasing number of educated and experienced

Natives, their expected careers were also being thwarted by the small but increasing number of more highly trained Dutch immigrants on the other. In response came political moves to restrict immigration to a minimum and to continually press for the claimed interests of the long-term European stayers. As with pressures for ethnic segmentation, this had implications for the business culture of the industry and for the practices of upper management.

By the late twenties and early thirties the politics of the wider society, in which the European sugar employees were now only a statistically insignificant proportion of all Europeans employed in the Indies, provided a more strongly segmented and repressive framework for political demands. In carrying out its duties until the early years of the twentieth century, management had not needed to consider demands from the wider civil society. After nearly twenty more years of developments in the Netherlands and in the Indies, it had to be more sensitive and responsive, including to its own lower ranks. This, however, was a short interlude before the potential challengers were either recognised and contained by its own organisational evolutions and greater sensitivities, or were effectively monitored and repressed by the state. Within the economically depressed Java of the 1930s, the only effective challenge to management was the government.

F. THE STRUCTURE OF FACTORY MANAGEMENT WAS INFLUENCED BY THE COLONIAL PROTECTION OF NATIVES FROM IT

Until the early 1930s there was a continual capitalist interest in expanding the industry. However, the increase in numbers of new factories or the expansion of existing plantations was constrained by the need to obtain permission from the government. This involved a lengthy and detailed enquiry into the effect it would have on the local population, mainly through use of land and water. Crucially, ever since the Factory

Ordinance regulating the industry from the end of the nineteenth century, any such permission was subject to there being no application for use of the same area by an existing factory.

This priority for expansion by existing factories rather than setting up new ones was one of the industry-supported restrictions on free competition. However, its basis was in the continuing colonial state ideology that the Natives needed to be protected from other stronger interests, including those of large scale capitalism, normally taken to be from Europe. Applications of this ideology included forbidding non-Natives to buy land which already had Native land-ownership rights over it, the setting of boundaries within which only one factory could use land, the setting of a maximum proportion of the zone within those boundaries for use at any particular time, and the banning of continuing use of the same land over more than a single cropping.

The governmental setting of boundaries reduced the pressure on Native land-owners from interested factories or their agents but also, by regulating a monopoly to one factory, prevented land-owners from benefitting from any competitive bidding. This could come only from people wanting to grow crops other than cane. Although these regulations were infringed in various relatively minor ways, the main principles were maintained with only a few significant changes over the whole period. From the end of the nineteenth century, the state intervened by requiring official approval of the rental contracts between factories and Native land owners. At this stage only short-term contracts were approvable. Twenty years later, long term rental agreements covering up to seven three-year exchanges were allowed. Finally, as part of the standardising trend in the administration of the late colonial society, the previously different system of permission continuing in the Principalities was gradually brought into line with the rest of Java, mainly during the 1920s.

These protective government-decided and imposed regulations prescribed several peculiar features of management. From the late nineteenth century, major management resources had to be used in annually estimating cane growing land needs (which could change with new agricultural technologies and expansion plans) then in

finding and negotiating appropriate accumulations of separate pieces, in arranging contracts and advances, in measuring and mapping, in arranging for its availability at the most desired dates, in the major working needed for local irrigation and planting, planning and laying of temporary rail-lines, planting, arranging for clearing and reversion to second crops or rice after harvesting. In the 1930s, negotiating compensation for contracted land not used, became a new and large-scale management task.

All these management activities would not have been required if cane was grown by others and bought in by the factory, or if continuous use of fields allowed ratooning (the repeated regrowing of cane from the same root). Many other field activities required management, such as caring for the growing, fertilising, irrigating and protecting of the cane, assessing its ripeness, supervising its harvesting and transporting it to the factory. These were additional to the functions of management in a tropical cane sugar factory which bought in cane but, nevertheless, would have been managed similarly to those where it was grown by factory employees. The proportional load of tasks and thus the organisational structure of management in the Java industry was correspondingly different from that in, for example, the Caribbean industry. Moreover, Java required closer, more continuous and more personal interactions between management and local societies, thus with local government officials. As so much of its work involved the fields, the world of management had to be more involved and knowledgeable about local Native society than if that society were met only at the factory weighbridge. Therefore, a larger proportion of management personnel and skills were needed for field-related activities than would otherwise have been the case. The importance of this work was shown in the wages, profit shares and career paths provided, culminating in the First Employee and Administrator ranks, attainable only through the field positions.

Management of the Indies sugar industry differed from that of the other current large-scale plantation crops because they did not involve the same shifting culture, the same scale and technological complexity of industrial processing, or the same need to

maximise integration of planting, harvesting and processing. The respective reasons for these differences were: other non-rice crops were usually grown on long-lease, non-irrigated land; they did not require large management systems of trained personnel; and there was not the same pressures on management to assess and organise the sequences to be as continuous as possible - particularly the need to start processing a crop as soon as possible after cutting, with its implications for harvesting, transporting and processing capacity and also for planting and growing to maximise continuous ripening.

G. CHANGES IN MANAGEMENT WERE RESPONSES TO BOTH EXTRINSIC AND INTRINSIC PRESSURES

The more immediately obvious changes in organisation of management from the 1880s to the 1930s were responses to pressures from outside the industry. Two decades of corporatisation of personal ownership and consequently of upper management, were pushed from the mid-1880s largely by financial needs and business failures stemming from international competition. The first effective sales cartel in 1917 was evolved by the industry's upper management as a defense against weaknesses of the export sales market caused by World War I. The collective upper management industrial body created in 1920 and the standardisation of middle management were responses to increased political and industrial demands by employees with potential industrial power. The desperation of collapsing markets and prices at the end of the 1920s resulted in creation of a compulsory selling cartel, implementation of export licensing, and the government-enforced contraction and consolidation of the industry and its management.

More incremental changes were sometimes responses to intrinsic needs. The calculated adoption of technological innovation drove management changes. From late in the nineteenth century the hierarchy of chemists began, then a few new lower level

technical positions in railway and, much later, electrical specialisations were created. A general increase in positions was needed to manage the generally increased scale of operations, with an increase in levels of supervision and advice from above the factories as technologies became more refined and precision of control more pressed (see below). The levels of preservice training desired, but not always obtained, were raised as fast as training courses were made available.

Management constantly pressed the continuous production processes in factory and field for increasing efficiency. In turn, this demanded rising amounts of increasingly detailed quantitative production data. As the Research Stations' collective organisation of applied research was extended across agricultural, technical and chemical processing technologies, the data elicited and analysed was increasingly industry-wide as well as factory- and company-wide. Comparative data and analyses existed for single factories and, as management companies provided their own research and advisory services, for company groups of factories. Also, the detailed and cross-checked book-keeping involved in payment for the large amount of measurable piece-work in the industry provided for easy quantitative monitoring of the performance of lower level field management, through their accounts. Because management involved visibly and materially productive activities, there could be closer monitoring and control of the management ranks. The production data not only allowed management to make assessments and decisions about technological questions, but also to monitor and make comparative assessments of the work performances of the managers themselves. Moreover, the careful recording and storage of data provided for continual assessments across time; hours, shifts, days, weeks, months or years. The more widely elicited and collected the data, the higher the rank at which management performance could be analysed, compared and discussed using information more objective than personal opinions of superiors.

H. LEVELS OF MANAGEMENT WERE EXPANDED AND STANDARDISED

Chandler proposed that successful evolutions of middle management were technologically based. He argued that changes were based on decisions about utilising new technological possibilities more profitably. This was supported by evidence from the incremental changes in the factory-field combinations of the Java sugar companies.

Management in the integrated factory-field units can be considered as middle and lower levels with the Administrator at the top of all the internal hierarchies. The demands of corporatisation and of technical specialisation caused the numbers of layers of management *above* the Administrator to be increased. The positions of company Directors and Board Members were created to be an upper management. The interposition of Java agencies of Netherlands managing companies or local management companies into the administrative hierarchies, and the appointing of Superintendents and Advisers of groups of factories, formed extensive but shallow levels of upper-middle management.

Operating and managing the integrated plantation-factories became relatively standardised. By the early years of the twentieth century the first stage of expansion and industrialisation into mass continuous-processing had occurred. Within and just above the factories the middle and lower managements were similarly structured and enjoyed increasingly standardised conditions of employment (see below). Almost all were managed in Java by similar hierarchical structures of middle and lower management, mainly working in the factories and fields with a thin layer above these of technical Advisers and a Superintendent based mainly in a city. At first, some of these Superintendents continued to be Administrators but the position became more and more a full-time one. These hierarchalised managements appear to have operated smoothly.

All these management levels had to be paid for by combinations of salaries, fees and profit shares. The financing companies were paid various mixtures of interest

charges on loans for recurrent operations and capital expansion, also fees and profit shares if they had management responsibilities for the factories they financed. If these companies took on upper management positions in the companies they financed, the management income for these could be paid to the company as an entity or to its individual Directors or Board Members. This was in addition to commissions on sales of the sugar these companies received in their consignment contracts with these factories and the profits from the factories they owned themselves. The solely management companies were paid fees and profit shares for their middle management activities, plus for upper management if these responsibilities were also delegated to them. Particularly in the smaller owning companies, these different levels were collapsed into fewer with owning-family members holding them, thereby retaining higher proportions of operating income within the circle of owners. The upper-middle management and the Administrator were paid wages and profit shares, the latter was normally expected to be much larger than the wage. The others working in field and factory would get most of their income from their wages, but gained an increasing profit share as they moved up the ranks.

I. FACTORY MANAGEMENT EVOLVED CLEAR STRUCTURES

The employment conditions in the industry were strongly segmented. The greatest number of employees, male and female, worked under very short-term agreements in casual, piece or day labour with few, if any additional provisions - perhaps meals and simple shelter if necessary in the prevailing labour market. Others worked under seasonal contracts. A minority had permanent employment with various other rights, such as annual bonuses and pensions. Most of these were Native employees, with further clear differentiations between their conditions. A minority of these, the artisans (*tukangs*) and the "educated" laboratory and clerical employees, were likely to have housing and perhaps some other facilities provided, including separate hospital wards.

The educated, thus more "European", few would have better quality facilities and possibly individual houses in a separate area. The little group of European employees had their own "European-class" enclave next to the factory with the strict hierarchies of their management bureaucracy embodied in the relative quality of their housing, and in office-holding in their associations. The Administrator's house, probably joined with the office and lodging for official visitors, was totally more splendid than the others. All houses above the lowest ranking would have had some facilities for servants.

Underlying this segmented gradation the colonial dual labour market produced two clear classes of employment. For the Europeans in management, this was increasingly standardised and centrally negotiated across the whole industry, that is, for all those below the Administrator, and in some cases the First Employee who would deputise for him. Conditions for all the others were almost entirely non-standardised, and negotiated by the factory managements. The few exceptions included the minimum daily rate for unskilled labour which, however, was mainly paid at the considerably higher piece rates, and the number of months' wages to be paid as the annual bonus to permanent Native employees.

The standardisation for European positions had been the shorter-term response of upper and upper-middle management to the industrial pressure of lower and lower middle management - with a longer-term intention to prevent competition being set up between companies' upper managements. This reflected the Europe-oriented labour market. A corresponding centralised system for the non-European, non-management employees was averted. This had been made possible by the relations between them and the employers in the local Java labour markets. The balances, both of potential labour supply and demand and of the political interests of the colonial state in maintaining the current order, were in favour of the employers at that time.

The enlargement of the integrated factories and planted areas required more middle and lower management personnel, although increasing less than proportionally to the enlargements in production. From somewhere between half a dozen and a dozen before the initial expansions of the late nineteenth and early twentieth centuries, their

numbers were doubled over the next two decades before a slow growth in the twenties to an average of about two dozen, ranging up to about twice this in the few very large establishments. This increase did not change the basic structure of management from its late nineteenth century formalisation into its "technical", "field", "administrative", that is office clerical, and, lastly, "chemical" hierarchies. It had merely added more ranks or parallel positions, increasing the number of promotion steps and lengthening the time taken to progress through them. Directions for promotion and the need to be promoted through each step did not change. The alternatives continued to be from near the bottom to the top of either of the two factory streams then from near the bottom to the top of the field ranks or, if less trained, from one of the lowest field or administrative ranks more slowly up through the field. The administrative ranks led only out from the lowest positions. Employees without special training might move from these to other low level factory or field positions.

From at least the late nineteenth century, Administrators came up through the non-office ranks until they were finally promoted from the second-in-charge, and potentially deputising, position of First Employee. Initially this was without any special training, rarely available then. By the time of their appointment as Administrator they were experienced practitioners who had been assessed and promoted several times by their superiors. As was normal in the current Indies and Dutch societies, some might have been advantaged by their family position or, in a few cases, be sponsored as a successor to a preceding member of the owning family. However, they still needed the prerequisite successful experience. After the usually steady increments up from one adjacent rank and contiguous salary step to the next apart from a dip from the top of the factory to the bottom of the field hierarchies the appointment to Administrator was a very large, potentially highly profitable, and for most men the final promotion. Administrators or other senior factory management staff did not become Advisers. These positions were largely not part of the main management hierarchy and were usually filled by more highly trained technical experts who had not worked their way up the ranks.

A small minority of Administrators subsequently were appointed to be Superintendents of all or some of the factories of an owning or managing company while a few were appointed to upper management positions. Further study of the overlapping owning and Board memberships that had developed by late in the period could also be useful in demonstrating the personal networks evolved. The understanding of careers at the top end of the management hierarchy would also be helped by looking at those individuals in senior positions who moved between companies.

Employees' careers were not international. In general, after starting in the Java industry workers stayed in Java. Exceptions were noted only in the mid-1930s when the Dutch-Indies industry was being closed down and the British-Indian being opening up. Then an unknown number of employees moved from Java. Although movement between the Dutch sugar beet industry and the Dutch colonial sugar cane industry might have been expected, there were no reports or passing references to this having been of significance. No individuals moving from the Java to the Netherlands industry were noticed. It was normal for those coming out to the entry positions in Java to have already had some experience in the Dutch industry as a compulsory part of their training (sometimes with a short additional period as well) but the reverse does not appear to have been the case.

It now appears that a large majority of the European management stayed employed by a single large owning or managing company and worked their way up the ranks of personnel across its group of factories. This structuring of careers within the one or more managed by one company was assisted by the, mostly post-War, setting up of pension schemes based on years of continuous service. These schemes were started in the mid-1910s by the HVA and Colonial Bank, followed by a collective cross-industry scheme from 1920. Given the standardisation of wages and conditions by the Employers' Association (JSWB), there was little poaching of these permanent staff. These "company men" were joined at work and in the European factory housing and social enclaves by a small minority others who were much less attached to this

settled little world, either from their own choice or that of others higher up the management ranks.

J. CHANDLER AND JAVA SUGAR

The evolution of the management of the Java sugar industry followed Chandlerian principles in several important ways, but differed from them in significant others. His assertions about the importance of pressures on internal organisation from technological possibilities, including in the evolution of levels of management and in flows of product and information, were supported by my research. However, in relation to the developing companies of the Java sugar industry during this period of their foundation and evolution, his theorised system of categories appears inadequate for analysing the complexity of family and others' involvements in ownership and management. Also, his general model of competition between industrial companies appears not to apply. Crucial elements in the companies' development were their managements' assumptions and calculations about possibilities provided and, more relevant, prevented by international trade politics, which were based in other countries' domestic politics and out of the control of Dutch or Indies politics. Managements were not able to operate in market environments as relatively unfettered as those in which Chandler's multitudes of cases could operate. It is possible that his model is adequate only in particular domestic or international political settings with relatively little interventions by governments.

Understanding the industry's management requires recognising that its business was a significant global sugar producer, an irreplaceable part of the local economy, and an integral element of Dutch colonialism. The Java sugar industry involved the complex interactions of two societies; one colonising, the other being colonised, but both changing. Management was influenced by assumptions and pressures from a variety of ideological elements in both, sometimes of competing elements within each. These influenced the changes in both its organisation and its personnel.

APPENDIX 1 THE JAVA SUGAR INDUSTRY BEFORE THE 1880s

Since the early seventeenth century there had been a Java sugar export industry, mainly in the north-west around Batavia, using traditional, simple technology and controlled by local Chinese merchants. From the end of the eighteenth century the direct Dutch government administration, which had just replaced that of the United East India Company (*Vereenigde Oost Indische Compagnie, VOC*), encouraged the industry and a few Europeans came into it. These included British entrepreneurs during and after the English 1810-16 inter-regnum, and there was some use of more advanced processing based on West Indies models. From 1830 these changes were followed by the rapid creation of the Cultivation System. (Blussé 1986: eg. 26-7, 85, 90-4; Guillot 1990: 31; Leidelmeijer 1997, especially chaps 3-4).

The Cultivation System was designed and instituted by the 1830-33 Governor-General (Van den Bosch). It involved a rapid organisation of government administrative power into compelling the cultivation of export crops, mainly sugar, coffee and indigo, for monopolistic shipping by the Netherlands Trading Society (NHM) to be sold in Amsterdam. Most of the sales' proceeds went into the Netherlands government revenue. Legally up to a fifth of villages' irrigated land could be allocated by government officials for growing sugar cane - but in practice often more was used, supposedly with some compensation from neighbouring villages. As well as this land procurement, the compulsory cultivation labour for the huge agricultural development was managed by the relatively few Dutch and many Native government officials, with incentive payments made to all levels. During this period there were fewer than two hundred European Residents, Assistant-Residents and Controllers across Java in the European Administration, about half as many of the largely hereditary Native Regents and far larger numbers of other Native officials in the successively subordinate ranks, down to more than thirty thousand village heads, in the Native Administration. Only some of the Residencies or Regencies were included in the Cultivation System but at its maximum extent about ten million people, nearly half the population of Java, were involved in one or other of its crops.

The management of the Cultivation System comprised a major part of the activities of colonial government administration in Java - involving land, labour, crops, transport and payments with widely spread supervision, negotiation, reconciliation, measurement, accounting and financing. The opportunities for individual and family advantage provided at all management levels of the massive System were utilised thoroughly by those Europeans and Natives who saw and were in positions to make and take them. Income was derived from factory ownership and from incentive percentages and margin-taking at each stage of transfer of the product by Europeans,

and from wages, percentages, margins and as suppliers by Natives. There were only a few Europeans involved, in private or official positions or moving between them, and many times more Natives but the rewards to the latter were only small fractions of those for the former - with even these were not available to most of those labouring in the System. The "cultivation percentages" for European government officials were stopped around 1870. These payments were continued for Native officials until 1907, but by then only for coffee growing as the 13-year wind-down of the Cultivation System for sugar had been completed by 1891. (Fasseur 1991: 46).

Factory processing during the Cultivation System was not an industrially static industry. Significant advances in milling and processing technology were introduced by owners, often encouraged by overseas equipment manufacturers and by Indies government advice and advances (Leidelmeijer 1997: especially chapters 5 and 6).

Beyond the sugar that had to be supplied to the NHM in satisfaction of the factories' basic government contracts, any excess produced could be sold privately. By 1840 about 25% of sugar exports were handled by private traders, by 1850 about 35%, while by 1860 about as much sugar was being produced and sold "privately" as under government contract. The profits from this contractually-allowed "free disposal" could be considerable, with the factories only having to pay the government for the estimated costs of growing the government-organised and -supplied cane used for it. After 1870 the handling monopoly of the government-contracted sugar was ended so all exported sugar went through private traders. (Fasseur 1991: 246; Van Niel 1992: 145-6; Knight 1993: 9).

However, in the upper circles of the Netherlands the preference for a more Liberal, free market-driven exploitation of its Indies colony gradually overcame that for a more State-controlled one. This change was partly from increasing reactions against the publicised manipulations of the Cultivation System for private European benefits, particularly following the more open government after the 1848 Reforms, and claims of its exploitation of peasants by their Native rulers. It was also partly from pressure from those who saw a more profitable future in a private enterprise system.

The colonial government's ban on non-Natives buying land was the normal situation, but there were exceptions. Among those relevant to the sugar industry were sales, which had to be approved by European officials, for specified uses such as building factories and facilities, European or Native worker factory-housing, laying railways, irrigation and similar agricultural-servicing facilities. Importantly, the ban did not apply in another two situations. One was in the various very long-lease areas (*erfpachtperceelen*) effectively sold to Europeans early in the nineteenth century by Raffles' British administration of Java during 1811-16 or by the subsequent Dutch administration returning after the end of the Napoleonic War. The other was for land

which was officially "waste land", that is still too marshy or otherwise not being used by Natives. Both of these categories of land could be used for sugar cultivation by factories without infringing the general ban against alienating existing Native land ownership. Several of the older factories grew cane entirely or partly on the *erfpachtperceelen*, while gaining rights to waste lands which could be drained and irrigated into agricultural use became important in some of the large new sugar estate developments of the twentieth century.

The appanage system in the Yogyakarta and Solo/Surakarta Principalities included rights to compulsory labour services. Non-Native renters of sugar factory or other estates there could use these services for cultivation and other work. The most detailed elaborations of the European involvements in the Principalities are provided in the succession of accounts by Houben (1989, 1992, 1993b, 1994a), while Suhartono (1983) has described the economic, social and political changes from the sugar industry in the second half of the nineteenth century. After 1859 there was large-scale development in the private cultivation of sugar in the Principalities. The liberalization of the admission of Europeans to the area and the favourable prospects of making a profit greatly stimulated this development (Houben 1994: 298). "The majority of entrepreneurs in the Principalities was of Indo-European origin. ... The background of the leaseholders was rather diverse. The Indo-Europeans were the descendants of soldiers garrisoned in Solo and Yogya, the first generation of whom had grown up in the vicinity of the forts in the capitals. Among the planters there were ex-officials who, at an advanced age, were still hoping to make a fortune in commercial agriculture. Also, some of the leaseholders whose names have appeared in the various lease registers were probably relatives of Dutch officials. In later years the sons of leaseholders were also active" (Houben 1994: 263). In the early 1860s there were at least a dozen sugar mills in Yogyakarta. In 1865 in Surakarta there were, according to one listing, at least 25 (3 steam, 11 water, rest buffaloes) - but, in another, 46 in 1863. The difference in these figures could be at least partly due to the reporting of economic activities by European land-leasers to the government being unreliable at the time, according to Houben (1994: 264, 300). He has also argued convincingly that in recognising the developments into the Liberal System, more importance should be given to the sugar production activities on these private lands as the government scaffolding of cane production in the Cultivation System elsewhere was taken away (Houben 1993b). As another indication of the different situation between the Principalities and the "government lands" of Java, it was in the Principalities that the only two Native-owned (but European-managed) modern factories were set up - *Tjolo Madoe* and *Tasik Madoe* in 1865 and 1871. Both were owned by the current head of

the princely Surakarta/Solo-based Mangkunagara house, with ownership remaining with his successors.

The changes in policy are indicated in the foundation dates of factories. From a variety of records I established these for 166 of the factories operating in the 1880s. Among the Cultivation System factories, 43 had started in the 1830s, 22 in the 1840s and 9 in the 1850s, the last in 1855. Although incomplete these figures cover 74 of the official 1858 list of all 92 operating government-contract, thus Cultivation System, factories. In the 1860s another 9, including four in the Principalities, were founded, 26 in the 1870s, 31 in the 1880s and 29 in the 1890s. By the mid-1890s a total of 195 were listed as operating. Founding dates, and for some almost all information, for over a dozen others referred to in the 1880s and 1890s could not be found, but some of these would have been small, simple operations only supplying crude sugar into internal markets.

APPENDIX 2 PERSONAL OWNERSHIP OF FACTORIES BY THE 1880s

G. von Bultzingslöwen, a long-established German Surabaya-based trader, owned 5; P.H.A. Van der Broek d'Obrenan part-owned 5; G. Birnie, C.G. Harvey and G. Lebret each part-owned 3; Th. Etty, Hofland, D.J. Jut, and H.M.E. Van Der Brandeler each owned 2.

The individuals and inheriting families included Ament** (*Ardjowinangoen, Gempol, Glagamidag, Paroengdjadja*); Anthonijs (*Alkmaar, De Goede Hoop/Pengkol*); Baud** (*Ketegan, Soekodono*); Blanckenhagen** (*Djati*); Van Blommestein** and Bosch (*Kalimati*, the former also *Wonopringgo*); Boerlage** and Thurkow** (*Langsee*); Bool and Birnie* (*Sroenie*, the latter also *Nangkari, Pradjekan*); Borel (*Klaling*); Van den Bosch (*Srogol*); Van der Broek d'Obrenan** (*Gemoe, Poegoe, Boederan, Djatiwangi, Tjepiring*); Von Bultzingslöwen (*Bagoe, Djaboeng, Perring, Pesantren, Bandjardarwa*); Dezentjé* (*Karanganom, Ponggok, Prambonan*); Dorrepaal** (*Delanggoe, Gondang Winangoean*); Eilbracht (*Somobito*); Enger* (*Tegelweroe/Tjebongan*); Eschauzier (*Gempolkrep, Bangsal, Sentanen-Lor, Brangkak, Dinoyo*); Etty** (*Oemboel, Wonolongan, Wringinanom, Boedoean*); Feist (*Sindangloet*); Gonsalves* (*Kalimaro, Tersana, Lemahabang/Kersana/Ketangoengan-West, Tjigobang, Tjiledoek, Waled*); Van Haeften and Van Delden (*Kandang-Djatie, Phaëton, Koning Willem II*); Han** (*Pleret, Pandjoenan, Tangoel-Angin*); Harvey (*Wonoaseh, Wonolongan* [the latter with Ettys]); Hempenius (*Klatjie*); Hoevenaar** (*Adiwerna, Djatibarang, Karangsoewoeng*); Itzig Hein** (*De Hoop/Majong*); Jut (*Seloredjo, Peterongan*); Kläring* (*Gesiekan, Randoe Goenting*); Kraag (*Gedaren*); Van Krieken (*Padjarakan*); Kruseman (*Waroe*); Kwee (*Grati/Dankbaarheid, Djatipiring, Kawisredjo, Krian, Wangoen-Redjo/Djaparan*); De Lange (*Baijeman* [with Teding Van Berkhout family members]); Van Lawick** (*Balong Bendo*); Lebret (*Kaliteloe/IJoso-Wilangon, Peterongan*); Loth** (*Watoetoelis, Poppoh*); Lucassen** (the *Doekoewringin* and *Kemanglen* pair); Morbotter** (*Petjangaan*); Nering Bögel** (*Pakkies*); Pietermaat and Suermond (*Gending, Maron*); Raaff (*Rewoeloe*); Rose (*Kremboong, Toelangan*); Schmuster (*Gondang Lipoero*); Semster (*Beran*); Baron Sloet Van Oldruitenborgh** (*Poerwodadie*); Tan** (*Ardjosarie, Loewoeng-Gadjah, Karangredjo, Krian, Mabet, Poerwasrie, Soemengko/Soewangko, Tjiledoek*), Teding Van Berkhout/Van Wijk (*Tjomal, Baijeman/Bajoeman*); The (*Ketanen, Porrong, Tjandie, Soemberredjo/De Hoop*); Tjoa (*Tawangsarie, Wirono-Lor, Ngagel*); Weijnschenk* (*Barongan, Padokan*); Wiederhold**, Suyck and Van der Crab (*Kloerahan*); Wieseman* (*Bantoel, Tandjong Tirto*).

Long established families included those marked with one or two asterisks, those with two having already been listed in 1858 as holding contracts at the peak of the Cultivation System, with others such as Teding Van Berkhout and Van Wijk buying in shortly afterwards. Other Old Indies families such as the Boutmy, Burgemeestre, Dinger, Goldman, MacGillivray, Van Motman, and Van Riemsdijk were also related into those directly owning factories by this time. Dutch newcomers such as Pijnacker Hordijk and Broese Van Groenou had also married into them.

Moreover, this significantly under-indicates the continuity as the government's list includes only factories in the "Government Lands", excluding those in the Principalities - such as the long-continuing owners in the Dezentjé, Weijnschenk and Wieseman families. Importantly it also obscures some cases of the continuing descent of family ownership through married daughters.

(Almanak 1858; Bloys Van Treslong Prins 1934-9; HCHO 1888; Christiaans 1992; Houben 1992, 1994, 1995; Van der Marle 1951-2: 487; de Neve and Houben 1997; Serie 1995: 58; Taylor 1983: ; Van der Veur 1968b: 195).

This listing may be a little misleading as, although normally all the same family members owned the same factory or factories, there were cases where, at least overtly, different factories were owned by different members of the same family - such as those of the Eschauziers, Ettys, and Wiesemans. This certainly occurred with different branches of same-named Chinese kin groups but further research would be needed to clarify this.

APPENDIX 3 YEAR OF ORIGINAL INCORPORATION OF PREVIOUSLY PERSONALLY-OWNED FACTORIES

The company for G.J. Eschauzier's *Sentanen-Lor*, *Brangkal* and *Dinoyo* was one of the first, by the mid-1880s, but this was very rare. Companies for Blanckenhagen's *Djatie*; Van Delden and Onnen's *Koning Willem II*; and *Kartasoera* had followed by the late 1880s. Among others, there had been incorporations by the early 1890s for Ament's *Ardjowinangoen*, *Gempol* and *Paroengdjadja*; the ex-Von Bulzingstown's five; Zuur and Van der Broek d'Obrenan's *Djatiwangi*; Pietermaat and Suermondt's *Gending* and *Maron*; *Kalibagor*; Van Blommestein and Bosch's *Kalimati*; *Kaliwoengoe*; Van Haeften and Van Delden's *Kandang-Djatie*; *Kanigoro*; and *Majong*, and by the late 1890s for the Eschauzier *Bogokidoel* and *Gempolkrep*; Dorrepaal's *Delanggoelan*; Teding Van Berkhout/Van Wijk/Des Tombe's *Tjomal*; Lucassen's *Doekoewringin* and *Kemanglen*; Schmutzer's *Gondang Lipoero*; *Gajam*; *Gemoë*; *Langsee*; the Van Hoboken company's five; and *Menang*. It was not until the early twentieth century that the Hoevenaar Concern's *Adiwerna*, *Karangsoewoeng* and *Djatibarang*; Dezentjës' three; Rose's *Kremboong en Toelangan*; Wieseman and Broese Van Groenou's *Bantoel* and *Tandjong-Tirto*; the little *Bandjoepoetih*; Eschauzier's *Ketanen*; Weijnschenk's *Barongan* and *Padokan*; Th Ety's *Boedoean*; de Vogel's *Kadhipaten*; *Gesiekan*; Baud's *Ketegan* and *Soekhodono*; or Go's *Modjopangoong* were put into operating companies or *Bangsai* put into the Eschauzier company. Some, including Van Lawick's *Balong Bendo*; *Baron*, *Djoewoeno* and *Koedjonmanis*; Kraag's *Gedaren*; Lebret's *Kedawoeng*; and *Krebet* were not incorporated until the mid-1910s, while a few others, mainly but not only Chinese-owned (eg. Eilbracht's *Somobito*) stayed personally-owned during this period of change. Most of those closed were never moved into companies.

APPENDIX 4 ORIGINAL INCORPORATION OF COMPANIES WITH MORE THAN ONE FACTORY

- The Java Plantation Company factories were the adjacent pair *Bagoe* and *Djaboeng*, *Pesantren*, *Perning* and *Bandjardawa*. For a mixture of financial, operational and health reasons *Djaboeng* was closed in 1899 and its planting absorbed by the higher-lying *Bagoe*.
- The Ament company's factories were the nearby *Ardjowinangoen*, *Gempol*, *Paroengdjaja* and *Glagamidang*. The last was soon closed and its planting absorbed.
- Van der Broek d'Obrenan's were *Gemoe*, *Tjepiring* and *Poegoe*, the last absorbed into the others from 1898; the Hoevenaars' were *Karang-Soewoeng*, *Adiwerna* and *Djaribarang*.
- The Baud heirs' pair were *Ketegan* and *Soekhodono*; the Weijnschenk heirs' *Padokan* and *Barongan*; the Roses' *Kremboong* and *Toelangan*.
- The administered Burge and Moorman company's pair were *Djombang* and *Pandaän*, the Van Hoboken Company's were *De Maas*, *Winongan/Bekassie-Oost*, *Ngempit*, *Soekowidi* and *Sragi*.
- The Eschauziers' Modjokerto factories were *Bangsäl* (built 1838), *Brangkal* (1866), *Dinoyo* (1882), *Gempolkrep* (1845), *Ketanen* (?before the mid-1880s), *Sentanen-Lor* (1834), *Tangoenan* (1874) and *Pohdjedjer* (1891), the last bought, at the beginning of the 1900s. The other two, both in the Kediri region, were *Bogokidoel* (1890) and *Poerwoasrie* (1851).
- Oei Tiong Ham's factories were *Pakkies* (built 1837), *Tangoel-Angin* (1834) with its closed neighbour *Pandjoenan* (1860), *Plossso/Ponen/Poeloe-Gedang* (by the mid-1880s), *Krebet* (in the early 1890s) and *Redjoagoeng* (1894). Their financing and consignment-contracts were handled initially within the family's Kian Gwan Trading Company, from the mid-1910s management was by an allied specialised company, the Semarang Administration Company, and from the beginning of the 1920s by the "General Company to Operate the Oei Tiong Ham Sugar Factories".

APPENDIX 5 FINANCING AND EXPORTING COMPANIES IN THE 1880s

FINANCIERS

The **Netherlands Trading Company** (*Nederlandsche Handel-Maatschappij, NHM*) had been operating as the Netherlands' greatest trading and development company since 1824, with a legal monopoly in the Cultivation System trade until 1870. In 1882 the *NHM* had dropped its 60 years of activities in trading on its own behalf and turned to be only a financier and bank. According to its official centenary history (Mansvelt 1924: 415) the *NHM* was advised in this by J. Hudig, its ex-Secretary and the founding director of the Colonial Bank which had just been set up in 1881. In 1883 it had reduced its plantation financing by over a half, had very large reserves and so from 1884 could both cover its own predicted losses and also contribute to the refinancing of the others.

(Helfferich 1914: 104-7, 107-12; Mansvelt 1924: 415-6; "The Netherlands Trading Society Story" 1963: 6; also see the introduction to its recent ARA inventory Wijmer and Tempelaars 1998).

Dorrepaal & Co was an established local company with large plantation interests in the Principalities. In 1884 it failed then, after raising f. 6 million of new capital and an unaccepted attempt to turn itself into a bank as a limited company (the *Dorrepaalsche Bank der Vorstenlanden*), was forced to agree to the plan of the *NHM*-lead refinancing syndicate and became the **Principalities Plantation Company** (*Cultuurmaatschappij der Vorstenlanden*) in 1888.

(Annual Reports from 1888; Helfferich 1914: 143-5; Mansvelt 1924: 417).

The **Netherlands-Indies Trading Bank** (*Nederlandsch-Indische Handelsbank, NIHB*) founded in 1863 in Amsterdam, had included plantation-financing among its wider banking functions. In an early response to the financial crisis it unsuccessfully offered its plantation interests to the *NHM*, then borrowed f. 9 million at 5% and in 1884 set up the new **N-I Agricultural Company** (*N-I Landbouw Maatschappij, NILM*) as a daughter-company for those interests.

(*NILM* Annual Reports from 1886; Helfferich 1914: 70-80).

The **Amsterdam Trading Society** (*Handelsvereniging 'Amsterdam', HVA*) had been set up in Amsterdam by five merchants in 1879. It was based on three existing trading companies, two of which, H. Reineke in Amsterdam and Van Beek, Reineke & Co in Batavia, were owned by the man who became one of the two founding directors, while the other, Wille, Gans & Co in Surabaya, became the initial representative of the *HVA* in the Indies. The founding intentions were to supply the

import needs of private agriculture in the Indies, one of the founding large shareholders being Stork et Cie, a sugar machinery maker and supplier. In support of these intentions the HVA quickly extended into a little plantation financing (one in 1879, four by 1884). In 1881 it had doubled its initial f.1.25 million capital and, as it had been concentrating on its trading and running a more conservative lending policy, it had less exposure to loss-making factory debtors in 1884. Doubling its capital again in 1889 it also raised several other loans over the decade and, to allow it to take on factory management roles, changed its founding statutes from only specifying import-export activities to include the possibility of operating industrial activities.

(Annual Reports from 1879; Brand 1979: 11-17; Goedhart 1999: 16-20; Helfferich 1914: 120-2.)

The **Colonial Bank** (*Koloniale Bank*) had been set up in Amsterdam in 1881 as a plantation financier by M.C. Calkoen and J. Hudig Dzn (who had previously risen in the NHM to be its 1878-9 Secretary). To survive the crisis the bank raised from a rescue committee another f.5 million at 5% (thereby doubling its founding capital) and continued to trade.

(Helfferich 1914: 160-6; Van der Capellen 1941; Schor n.d.).

The **Rotterdam International Credit and Trading Society** (*Internationale Crediet- en Handelsvereniging 'Rotterdam', or Internatio*), founded in Rotterdam in 1863 mainly to sell Dutch fabric from the Twente factories into the Indies, had expanded into the plantation export-import sector in the 1870s. In its response to 1884 it raised over f. 2.5 million at 6%, including from Amsterdam bankers and the NHM rather than from only its previous Rotterdam lenders.

(Mansvelt 1924: 417-8; Sipos 1992: 9-10).

EXPORTERS

The Dutch **Wellenstein, Krause & Co**, Batavia, one of the major sugar exporting companies which survived 1884, was founded only in 1882 (with some links with A.C. Fraser & Co in Rotterdam, and initially represented in London by A.G. Fraser).

Far more established were the three British sister-companies **Maclaine, Watson & Co** (operating in Java through its Batavia office), **McNeill & Co** (through Semarang) and **Fraser, Eaton & Co** (Surabaya). In 1927 Maclaine, Watson lavishly celebrated its centenary in the Indies (*De Indische Courant* 2/5/1927). Fraser Eaton had part-ownership of a few of the consignment-contract factories from which it obtained sugar. With its plantation-based importing and exporting activities in sugar, fertilisers and chemicals it was described in the Surabaya Sugar Manufacturers Association Circular Nr 5, 1893 as "far and away the largest exporter of the Java

harvest". These extended to very large financing interests in several sugar-factories and, it appears, temporary part-ownerships as the consequence of defaulting.

Others exporters were **Erdmann & Sielcken** (German, through Batavia and Semarang); **Pitcairne, Syme & Co** (Batavia); and **Martin, Dyce & Co** (Batavia, formerly Martin, Greig & Co).

(Main sources: Wellenstein, Krause & Co 1932: 7, 11-12, 13; Tio Poo Tjiang 1923: 58-9).

These were the largest at this time but there were other and later, many other, sugar exporting companies often related to importing countries - mainly China, Japan and India.

By the 1900s the major Tokyo-based sugar trader **Dai Nippon Seito Kabushiki Kaisha** [Japan Sugar Refining Company] was well-established in Java. It owned three refineries in Japan and in 1908 consumed nearly all the Java sugar shipped into Japan - mainly for refining there. In that year its Batavia representative had circularised the exporters and factories in Java complaining in detail about the quality of what was being sent. These complaints were taken and responded to seriously, point by point, including calling on Prinsen Geerligs, now in the Netherlands, for an expert opinion on the latest colouring being used in the British, Continental and American markets. (Japan 1908)

APPENDIX 6 SOME CASES OF FINANCE COMPANIES TAKING OVER FACTORY OWNERSHIP OR MANAGEMENT

A. OWNERSHIP

Kanigoro

Its ownership was brought into the Kanigoro Plantation Company, established in 1890-1, with founding statutes specifying 500 shares: 330 and 165 respectively for the two founding owners, J.H. Van Meeverden, the Administrator, and J.W. Le Comte, an engineer in Soerabaja; and 5 held between three Colonial Bank members in Amsterdam - with the Colonial Bank appointed as its Director and the three members as its Commissioners. By the end of 1891 all shares were in the hands of the Colonial Bank representatives.

(A copy of the original statutes is inside the front cover of the minute book of the 1891-1935 meetings of the Company commissioners. The changed share ownership is recorded from the 21/12/1891 meeting. ARA 2.20.04 Koloniale Bank Inv Nr 1030)

Poerwodadie

By the 1880s the factory comprised two parts, one continuing under the Cultivation System the other built as a Free factory, the whole owned since the 1850s by Baron Sloet Van Oldruitenborgh Snr. It had consignment-contracts and other financing from the NHM, including a loan of nearly f.500,000 for the rebuilding and re-equipping of the Free part of the factory to be one of the most modern in Java ready for the 1883 season. This had been advised by the Baron's son after discussion and approval by the NHM during his visit to Java in 1881. However, the operation of the new factory, loan repayments and the 1884 crisis lead to losses rather than the expected profits and Baron Sloet Jnr. came back to Java for the 1885 campaign, clashed with the Administrator of eight years, H. Beretty, sacked the Chief of Fabrication and banned the Administrator from going into the factory before returning to Europe. The NHM initially sided with the Administrator and appointed another, D. Jut, at its *Soekhodono*, to inspect and report while Baron Sloet Jnr. appointed his own representative to report to him. In 1886 the NHM's Batavia office reported unfavourably and Baron Sloet Snr., now 62 years old, came to Java to supervise the 1886 campaign. Beretty, from an Old Indies family, was replaced as Administrator by W.C. Uhlenbeck, son of a previous Minister of Colonies, who had seven years previous experience at another factory. Nevertheless, falling prices produced another loss and, the debt having increased to f.1.5 million, the NHM foreclosed and took possession, ending 35 years of the Baron's ownership. He was granted a life share of 10% of any profits, plus a 10-year right to

re-buy the ownership for f.1million. The factory's ownership was brought into a NHM-owned company with capital of f.500,000 in 1888. Uhlenbeck stayed as Administrator for another ten years. The operations were profitable for 1887 and 1888 then were hit by a rapid spread of the sereh disease. By the early 1890s the then ex-Cultivation System component was closed and the expert opinion was that only another major redevelopment of the factory could ensure future profitability. A temporary solution was found by the NHM buying the most urgent equipment and the company renting it. However, the old Baron's repurchase right was a barrier for the NHM, especially as he was attempting to set up a syndicate in the Netherlands to raise the money. Therefore, in 1892 the NHM negotiated a settlement in which he gave up that right in exchange for his life profit share being extended after his death to his widow. The NHM then financed the redevelopment.

(*Gedenkboek Van de Suikeronderneming "Poerwodadi" 1833-1933: 88-98*)

Gending

By the 1880s *Gending* was mainly owned in complicated relationships involving the Horst, Suermondt and Pietermaat families. However, Internatio held one fifth which had been ceded due to a debt owed by one member's husband over a failed sugar factory (*Parakantrees*) in West Java. *Gending* was currently administered by D.F.K. Pietermaat who had also set up the adjacent *Maron* which, like *Gending*, had signed contract-consignments with the then-new Colonial Bank in 1882. As a consequence of the 1884 crisis *Maron* became deeply indebted to the Bank, which took a mortgage over the 2/5 combined share in *Gending* of Pietermaat and his wife. After his death in 1886 this was executed. Thus in 1887 ownership was shared between the Colonial Bank (2/5), Internatio (1/5), and fourteen family members, the daughter and grandchildren of a previous owner; Mevr. E.M. à Brakel Reiger-Horst (1/5), seven Pietermaats and six Suermondts (each of the two groups of children 1/10). The family members could not agree about how to separate their undivided holdings and took the matter to a court in Soerabaja, which judged that their shares should be auctioned locally if they could not agree among themselves. They then did agree and a limited company, the Gending Plantation Company, was set up Amsterdam in 1888. Its 420 shares were owned in the previous proportions. The Bank soon acquired half of the family's shares through Pietermaat's widow obtaining all her children's inherited shares (by cession from the five majority-aged and by exercising her rights over the other two) and ceding them to the Colonial Bank to quit her continuing debt to it, but receiving f.250 a month for eight years. The Suermondt children also sold their shares to the Bank, apparently to quit a further debt. The Colonial Bank (3/5 owner) and Mevr. à Brakel Reiger-Horst (1/5) immediately invested large amounts to develop the

factory, the latter's share financed by the Bank at 7.5 per cent with 2.5 per cent sales commission on the consignment contract of her share of the production. The factory's development was sufficiently profitable to justify further modernising and expansion a few years later. This included a rebuilding, with the machinery being transferred between the 1897 and 1898 seasons to a new factory built on higher ground to avoid the continual problem of flooding exacerbated by the government's recent building of new irrigation. By 1896 a Suermondt family member had obtained a significant shareholding and was the Administrator for the next decade. (*Gedenkboek CultuurMaatschappij Gending 1833-1933*: 8-14)

Maron

Maron was adjacent to *Gending* and had been set up in the early 1870s by D.F.K. Pietermaat. In the late 1880s it was administered by a Pietermaat, probably his son. There were still two mortgages in 1885, one to the Colonial Bank the other, of f.120,000, to Mevr. Van der Boogaard. She threatened to execute this before selling it to Ho Yam Loo who, when D.F.K. Pietermaat died in 1886, took over ownership of the indebted factory himself. However, within two years he also died and the estate was passed to his son, Ho Tjiauw Ing, who took another mortgage of f.150,000 from Internatio but was declared bankrupt in 1892 and the estate auctioned locally. In the words of the official history of the related neighbouring *Gending*, the estate "threatened to come back into Chinese hands, which for the interests of *Gending* was deemed undesirable". The company owning *Gending* planned to buy *Maron* but, in discussion with the major creditor Internatio, this was not carried out. Instead, it was bought jointly for f.500,000 by Internatio and the Colonial Bank and put into the Maron Plantation Company, newly established for this purpose with an issued capital of f.800,000. *Gending*'s company initially took a minority shareholding of f.110,000 in this, but soon resold it again as its Board declared it was "not appropriate for one sugar company to hold shares in others". D.F.W. Pietermaat continued as *Maron*'s Administrator for several years. Both factories' consignment-contracts with the Colonial Bank were continued, as was their minority ownership by Internatio. (*Gedenkboek Cultuurmaatschappij "Gending" 1888-1938*: 23-24)

Pradjekan and Tangerang

The former had been started in 1883 and operated profitably until the early 1890s when its owners, the Birnie family and others, set up a nearby second factory, *Tangerang* - in part using money borrowed with a mortgage on both factories. Poor results in the mid-1890s lead to an inability to service the loans and the Colonial Bank, which had consignment-contracts with both as well as participation in the mortgages,

demanded a refinancing in 1898. This offered a reduction in the interest rate on the *Tangerang* mortgaged loan from 7.5% to the same 5% as that on *Pradjekan* and a continuation of the consignment-contract on condition that the value of the current shares were halved and more were issued, apparently bought mostly by men in or associated with the Bank. The Bank was appointed as Director of the Pradjekan-Tangerang company with further representation on its Board.

(See 25/8/1898 communication from Director of "Pradjekan-Tangerang" to several Coloniale Bank directors, in ARA 2.20.04 Koloniale Bank. Inv Nr 881, and company loan prospectuses issued later).

Bodjong and Kalimanah

In 1891 both were set up in Banyumas by the Semarang-seated "Kali-Klawing Sugar-factory Company". This had the long-established sugar-traders McNeill & Company as Directors and owners of a quarter of the shares, with a collection of other investors which included several very experienced in sugar and other plantation businesses. The four hundred f.1000 shares were issued to: McNeill & Co 100; C.W. Baron Van Heeckeren, previously Administrator of *Ardjowinangoen*, 50; Dr. E.H.L. Ostermann, previously Administrator of *Djeroekwangi/Bandjaran*, who brought in rights and lease of most of the land involved, 50; J.M. Pijnacker Hordijk 28; W.B. Van Groenou 27; D.W.F. Maxwell, also brought in some land and was to be the supplier of the machinery for the new factory, 47; C.L.F. Monod de Froideville 25; D.D. Fraser 25; F.J.H. Soesman 15; and 10 others with small share-holdings, including Mirandolle, Voûte & Co 2. As well as this share-capital, initial funding included consignment-contracts with McNeill & Company. However, in spite of the array of expert opinion about predicted profits, there were increasing losses requiring McNeill to write off about f.420,000 of debt to itself as well as having to pay the interest owed on loans from others within a couple of years. The company's statutes were modified in 1894 with half the value of the original shares written off, profit shares issued to replace ordinary and founders' shares and f.1,200,000 of new preferential shares issued. *Kalimanah* was closed, and the company shortly afterwards changed its name to the "Bodjong Plantation Company". The first Administrator, J. Sayers (previously at *Gemoe*) retired for health reasons in 1893 and was appointed Adviser. He was replaced by H.C.C. Fraissinet, previously the First Employee, who stayed in the position for two decades until 1915. The factory survived, was tripled in size and capacity, and closed in the 1930s.

(For the nineteenth century period see *Prospectus* and the *Statuten der Naamlooze Venootschappij "Suikerfabriek Kalie Klawing"*, the company's annual reports from 1891 to 1895, and communications from the Directors, McNeill & Co, to shareholders

in 1896. Information about *Bodjong*'s subsequent existence was taken from general sugar industry records.)

Ketangoengang-West

This, like all the Gonsalves' factories, had a consignment-contract and major debts with the NHM. Th.G. Gonsalves had bought the usage rights to a large area of private land after having built a factory (*Lemahabang*) in the 1860s for about f.550,000. Both that factory and the new *Ketangoengan-West*, its replacement, were still operating by the 1880s but unprofitably. A loan from the NHM of f.600,000 had only the annual interest of f.45,000 (7.5%) paid until 1884, when even this became impossible. By 1886 the debt had accumulated to f.822,000 - with the annual need to repay the consignment-contract (advanced by the NHM at 2.5%). The NHM then declared it would continue funding only if it were given all management control and, to pay for this, half of any profits as it believed it could manage the factory sufficiently more efficiently to be able to get its money back from improved profits over time. It took over administration from 1887. *Lemahabang* was closed and machinery moved to *Ketangoengan-West*. Not until six years later was this formalised in the setting up a company, the Ketangoean-West Agricultural Company (*Landbouw Maatschappij Ket.-West*), to take over ownership. Gonsalves initially owned 697 of the 700 shares, the others belonging to three NHM representatives from its Batavia Factory - but Gonsalves' shares were taken over by the NHM in a part-repayment of his debt. The statutes specified that the first Director and both Board members were these three NHM staff. In 1904 the company was reconstituted as the Amsterdam-seated Ketangoengan-West Plantation Company (*Cultuur Maatschappij Ket.-West*), with all shares owned by the NHM.

(See Landbouwmaatschappij "Ketangoenan-West" statutes enclosed in ARA 2.20.01 NHM Inv.Nr. 11587, and Th. Gonsalves' 60 foolscap page letter of explanation and complaint in Inv. Nr. 11588. Further information from ARA NHM archives and Colonial Reports (*Koloniale Verslagen*) was provided by Dr. G.R. Knight).

Tersana, Kalimaro, Tjiledoek

In 1898, after increasingly large non-repaid debts to the NHM another Gonsalves' factory, *Tersana*, was brought into the Batavia-seated Tersana Plantation Company with various family members owning all 640 of the f.1000 shares, including 76 listed for Louis Theodore Gonsalves, the recent patriarch who had died the year before. The NHM held the Directorship and at least one of the three Commissionerships, the other two being Gonsalves. A new Administrator (Ch Conradi, previously at the non-NHM *Kalibagor*), was appointed to replace L.Th. Gonsalves but only stayed for two years.

To provide for the expansion the statutes were then changed two years later to allow the company's capital to be raised to 2000 shares although only a total of 960 were placed. All shareholders proportionally increasing their holdings - except that the NHM immediately acquired almost of these, thereby owning 732 by the 1900 Annual General Meeting, with only one remaining family member, Th.G. Gonsalves, also attending with his 114. Another 10 were held by the Administrator Conradi and the others by family members. The small adjoining *Kalimaro* estate, also owned by the Gonsalves, was then combined with *Tersana*, followed by 1905 by the completion of the buying in of *Tjiledoek*, previously half owned and half rented by the Gonsalves. These three estates were then combined into a single source of cane for a new *Nieuw Tersana* factory. Its owning company was reconstituted as the Amsterdam-seated Tersana Agricultural Company, and the NHM took up almost all of the balance of the remaining non-issued shares. The separate minority holdings were passed on within the Gonsalves family but then gradually acquired by the NHM - the final remaining small parcels being taken in through the first half of the 1950s, well after the factory had been closed.

(Cultuur Maatschappij and Landbouw-maatschappij "Ketanggoean-West" statutes, share registers, shareholder meetings' minutes in ARA 2.20.01 NHM Inv. Nrs. 12172, 12173, 12189.)

Soerawinangoen

This old factory at Ploembon was owned by its Administrator, J.E. Court, and F. de Groof (Brussels). By 1894 the consignment-contract with the NHM included an advance of f.167,000 as well as a mortgage of f.450,000, to be paid over five years with the NHM sharing in any profitable carry-over. However, due to negative carry-overs and inability to repay, the NHM was still owed about f.396,000 by the end of 1895. In 1896 the factory was brought into a new Batavia-established Ploembon Agricultural Company, whose statutes specified that the first Director would be the Tiedemann & Van Kerchem management firm with Court and an NHM member on the Board. 540 shares of its statutory limited capital of f.570,000 were issued; 200 to Court, 180 to de Groof and 160 to NHM representatives. Further financing for expansion was then provided to the appointed Directorship by the NHM, after investigation and approval by the NHM's sugar factory Superintendent, C.J. Smulders, and its Batavia office. In 1901 the Directorship and Board was transferred to Amsterdam with one of the NHM representatives, who had moved from Batavia to Amsterdam, taking over as Director and a de Groof as one of the two Board members. The nominal capital was also increased to f.700,000 with the NHM taking up most of this and buying out Court's existing shares, the de Groof family adding the remaining

new shares to its existing holding. This situation continued until the late 1930s when the factory was closed down and the NHM, then owning 423 shares, bought the 233 other shares held by two members of the de Groof family.

(Cultuur Maatschappij "Ploembon" Statutes and share registers in ARA 2.20.01 NHM Invr.Nr. 12098).

Randoe Goenting

The Colonial Bank acquired first two thirds of its shares then, by 1900, the rest to acquit the debt of its previous owner, K.A.E. Kläring. He also granted was paid a pension until his death in 1906, following which his second Javanese wife Kasinem, baptised Bertha Fabiana, was paid a lesser amount, reducing as each child grew up, until she died in 1932.

(ARA 2.20.05 Koloniale Bank Inv Nrs 288, 291).

The Deichmann and Vom Rath-financed factories: Assembagoes, Baron, Klampok, Kloerahan, Pamottan, Sempalwadak

A.W. De Rijke of the Dutch-based firm De Rijke, Groskamp & Co had founded the Soerabaja Bank & Trading Company and set up the *Klampok* factory in the late 1880s then *Sempalwadak* in 1891, as well as owning the old and simple *Kloerahan*. The Company's major financing came from Deichmann & Vom Rath, an Amsterdam company involved in sugar trading. Poor results lead to the liquidation of the Soerabaja company in 1895 and its factories were taken by its creditor company, as were the indebted *Assembagoes* (opened 1885), *Baron* (1890), and *Pamottan* (early 1890s), each of which had been set up by different entrepreneurs. After visiting their newly-acquired factories in 1896, Deichmann & Vom Rath's Directors decided to retain and finance some expansion of *Sempalwadak* and *Assembagoes*, both subsequently being put into the "Sugar Plantation Company" (*Suikercultuur Maatschappij*), Amsterdam. *Baron* was sold to Liem Tik Koei, *Kloerahan* was sold to Han Hoo Lan and Han Hoo Tong who absorbed it into their neighbouring *Pleret* to form the combined *Pleret-Kloerahan*. *Pamottan* was closed. It is now not clear what happened with the ownership of *Klampok* as it was put into a new separate company. J.F. De Ruyter de Wildt remained as its Administrator from its first harvest in 1887 until several years into the twentieth century. He had transferred to it after being the founding Administrator at *Assembagoes*. In another indication of connections, J.W. Van Vloten, who had started at *Klampok* under De Ruyter de Wilde, moved to be Administrator at *Kloerahan* then, after it was sold and closed, became Administrator at *Sempalwadak* for the twenty eight years until 1924. The firm of Deichmann and Vom Rath continued

to take an active part in the management of its acquired factories, including appointing a Technical Adviser.

B. MANAGEMENT

NHM cases

The NHM's increasing involvement is shown in the Board histories for the companies set up including the NHM to own Vonck and Buwalda's *Peterongan* and *Kebon Hardjo* and the previously Gonsalves' *Ketanggoean-West* and *Tersana* (later *Nieuw Tersana*) factories. As well as the local management of the NHM's Batavia office being Board members or Directors of Java-established companies, they appeared in similar positions after they and the seat of the companies transferred to the Netherlands.

Present and future NHM directors Muller, Van Aalst, Guépin, Vester, de Haan, later Abbing and Pauw all appear as Board Members in the companies' minutes.

(i) In 1907, at its final shareholders' meeting, the Soerabaja company owning *Peterongan* had C.J. Van Aalst (a Director of the NHM and holder of 100 shares) as its Director, G.C. Vonck (an ex-Administrator, moved to the Netherlands, holder of 250 shares, and liquidator) and P. Buwalda (previously a Semarang merchant with, inter alia, forestry interests, with 125 shares) as Commissioners, with C.F. de Ruyter de Wildt (another ex-Administrator, representing the Huber heirs, holders of 25 shares) also present. In 1908 it was replaced by another established in Amsterdam but with a Soerabaja branch-office, twice the number of shares, Vonck now Director, Buwalda and De Ruyter de Wildt as Commissioners, and Van Aalst attending the first shareholders' meeting representing both the NHM's 200 shares and those of the Huber heirs. At this meeting it was announced that the NHM wished to have a representative on the Board and Van Aalst was appointed. In spite of their different share-holdings Vonck, Buwalda and Van Aalst all had six votes with the latter also having another two from the Huber shares. For the next decade both Board and Shareholders' Meetings were of these same people (sometimes with Van Aalst minuted as representing the Huber shares, sometimes De Ruyter de Wildt) except that different individuals were absent with notice, Van Senden (then Administrator) attended once while on leave in the Netherlands and the Widow Huber-Prins came to the 1914-6 share-holders' meetings herself. In 1919 De Ruyter de Wildt died, as did Buwalda while visiting the Indies. Mr. C.H. Guépin was formally proposed by Vonck and accepted by Van Aalst as a suitable replacement, "being the Commissioner of the company administering the late Buwalda's business and having had his full trust" - and presumably as he was also another Director of the NHM. So by 1920 the company's

Commissioners were an NHM Director and the NHM President, Van Aalst, since 1913.

(ii) G.C. Vonck and P. Buwalda also set up the company for the new *Kebon Hardjo* in 1911. Vonck was again Director, Buwalda a Commissioner and, initially, J.F. de Beaufort as representative of another financier, Van Eeghen & Co, as the only other Commissioner. These three each held a third of the total of six hundred issued shares. The factory's consignment-contract was with the NHM. As with *Peterongan*, at the first Board Meeting it was announced that Van Aalst would be proposed to Chair this Board at the first shareholders' meeting. At the next Board Meeting, as well as Van Aalst, Mr. J.C. Beerens de Haan was present, having been appointed at the just prior shareholders' meeting. He was Secretary of the NHM at this time, becoming a Director in 1917. The NHM was the major financier, taking over more debt when Van Eeghen & Co refused to advance more credit to the loss-making factory as more shares were issued, eventually fifty per cent more. At first attempts were made to explain problems in terms of the largely second-hand equipment used, although this did not apply to problems with the new railways and there were pessimistic opinions on its soil provided on request by Dr. Van Harreveld, Director of the Research Station's Agricultural Division. In 1915 Vonck went to the Indies to personally supervise the harvest and to try to obtain a concession for more land, with a written agreement that the application would be in his name but, if successful, the benefits would be passed as much to the two main debt-holders, Van Eeghen & Co and the NHM, as to the shareholders. While Vonck was away De Ruyter de Wildt was appointed acting Director. The factory continued to be unprofitable and the NHM declared it would advance further credit only if there were predictions of more success. Financing was advanced for a 1917 planting, based on preliminary results from 1916 being no worse than those obtained across Java in what was a pervasively poor year, and hopes were expressed for reports of improvements. These were not forthcoming, either from the Administrator or the NHM's Superintendent of Sugar Factories, Van Senden, still also Administrator at *Peterongan*. In 1918, after unfavourable reports of the crop, the NHM refused further credit. All the capital had now been lost, the company's debts were far greater than this, so the NHM obtained all the shares to make liquidation easier. Vonck formally resigned as Director and the Board appointed the NHM in his place. This position was formally accepted by F.P.J. Vester, a NHM Director, who was attending by invitation as was Ph.J. Priesman, head of the NHM's Agricultural section. Buwalda and De Beaufort resigned as Commissioners and NHM-Director Guépin appointed in their place. Subsequent shareholders' meetings were attended by only NHM Directors and Secretary, acting in various formal capacities in the NHM or in

Kebon Hardjo's company, until the final 1922 Meeting at which the liquidation arrangements were proposed and accepted.

(iii) In 1893 *Ketangoengan-West* had been brought into a Company with shares owned by L.Th. Gonsalves (697) and the NHM (3). The first Director was C.H.C. Bijvanck, with Commissioners A.H.G. Fokker and Martin Dames, each holding one share. These three men were all NHM management; Fokker was the President of the NHM's Batavia Factory from 1886-1894, Bijvanck was from 1900-1904, Dames worked in the Factory at this time. In 1904 this Company was replaced with another one with its seat in Amsterdam, reportedly for tax reasons, and its statutes legally proposed by A. Muller, C.J.K. Van Aalst and J. Bierens de Haan - respectively Directors and Secretary of the NHM. Of the 700 shares, 698 were allocated to the previous Company and 1 each to Muller and Van Aalst. The NHM was appointed as first Director of *Ketangoengan-West*'s new company, then continued to hold this position and those of Board Members.

(iv) By 1901 the new Batavia company owning *Tersana*, later *Nieuw Tersana*, also previously a Gonsalves-owned factory, had the NHM as Director. C.H.C. Bijvanck, A.H. Van Geijt and Y. Van Kooi, respectively President, member and Secretary of the NHM's Batavia Factory, and Th.F. Gonsalves were its first Commissioners. In 1905, when it was replaced by an Amsterdam-seated company the NHM was retained as Director. Van Geijt, who had transferred to the Netherlands, remained as a Commissioner. So did Gonsalves, but without fee for several years, also for tax reasons. Later H.G. Gonsalves came onto the Board Member to join Th.F. Gonsalves, who died in 1910.

NILM cases

(i) For its first year the Amsteedam-seated Java Plantation Company (*Javasche Cultuur Maatschappij, JCM*), which had been set up by the NILM to own *Bagoe, Perring, Pesantren, Bandjardawa*, had Mr. N.P. Van den Berg, the ex-President of the Java Bank, as its Director. He resigned when appointed President of the Netherlands Bank, and was replaced by a Director of the NILM, H.D. Kramer. In 1900 Kramer died and was replaced by the new NILM Director, W.F. Van Heukelom. There were also other overlaps between the members of the NILM and JCM Boards, including G. Birnie, an owner or ex-owner of several plantations, a founding Commissioner of the NILM and on several other sugar company Boards, until 1904; J.E. Van Linden, previously Administrator at NHM-related *Kemantren*, from 1901-1923; S. Everts, previously Superintendent of the NHM sugar factories and Director of the Lucassen-family's NHM-related *Doekoewringin*'s company; R. Van Lennep, also Director of the Principalities Plantation Company, 1906-1921; while Mr. M.C. Van

Hall, who had been on the Board of the Principalities Plantation Company and was an Amsterdam Commissioner of the NHM from 1885-1895, had left the JCM board in 1900. G. Eschauzier came onto the NILM Board in 1902 but not onto the JCM's.

(ii) In another example of the NILM's connections with long-established owning companies it always had the consignment-contracts and a Java-based representative on the close-knit Board of the Zuur family's Batavia-seated *Djatiwangi* company. The latter's Director was always a Zuur, the Administrators were always Zuurs as well. The other Commissioners were successively a co-owner and Administrator of another family-owned factory, a local Agent of the Principalities Company, then both a Tiedeman and Van Kerchem representative and another family member - who also had been an Administrator of another NILM factory.

**APPENDIX 7 EXCERPT FROM A COMPANY'S STATUTES
REFERRING TO DUTIES OF DIRECTORS**

Those of the Amsterdam-seated Gending Plantation Company (Cultuur Maatschappij "Gending"), as modified in 1930, included:

"Art. 8: Directors and Board Members must be (a) Dutch by birth and resident in the Netherlands, (b) [or] Societies, established in the Netherlands; Art.9: The Directors have the whole leading of the activities of the company; Art.10: The Directors need the agreement of the Board Members for (a) appointing, suspending, dismissing of the Delegate of the Directors in the Dutch Indies, for the paying of a fixed salary and further payments to him; (b) appointing and dismissing of the Administrator or the estate, paying his salary and further accounts; (c) appointing of one or more company secretaries ... but these can be dismissed by the Directors; (d) closing of a consignment-contract with the acceptance of the necessary working capital; (e) the providing of harvest-committments; (f) entering bond-loans; (f) the acquisition of immovable property of more than 10 bouws; (h) the alienation of immovable possessions of the company and the providing of mortgage-committments; (i) the carrying out of expansions or new workings which, considered as a whole , go above an amount of f 50,000; (j) the taking part in or in carrying on in own financial interests of companies or estates; (k) the alienation of shares by the company done by his own trading as for other societies or estates; (l) the entering into agreements as mentioned [...]; ... Art. 13: The Directors get a fixed annual salary, fixed by the Board, as well as a share in the profits as set out in Art.22; ... Art.22. sub 4: Out of profit saldo remaining after taking out 5% dividend and for payments (10% going to renewing funds until this reaches f.500,000, 10% going to reserve funds ditto) 6% goes the Directors and 6% among Members of the Board. The rest will go to dividends." (ARA 2.20.04 Inv Nr 881).

APPENDIX 8 SOME INDIVIDUALS IN MANAGEMENT

(The names of these men are asterisked in the main text.)

T. Van der Ben started work in the Java industry in 1866, eventually becoming Administrator of, first, *Paroengdjadja* then *Kadhipaten*, which he also co-owned for a while in the later 1880s before appointed by the NHM to be Superintendent of its sugar factories. He was later on the Board of the Hoevenaar Concern's factories. (*Archief* 1922: 321-2; *Jaarlijksche Versalgen van de Maatschappij tot Exploitatie der Suikerondernemingen Karang Soewoeng, Adiwerna en Djatie Barang.*)

J.J. Benjamin, Head Agent of the Colonial Bank 1895-1912, had transferred from the HVA where he had been one of its two Company Secretaries (Procuratiehouders) in the company's Surabaya and Batavia offices at its foundation in 1879 (Goedhart 1999: 18). He was later prominent in his advocacy of sugar companies providing more assistance to the local Native communities and was behind the Colonial Bank's innovative allocation of a small profit share to local infrastructure. After about twenty years as Head Agent of the Bank in Surabaya he was appointed as one of its Directors in the Netherlands in 1912 but died two years later.

Ir. F. W Bolk qualified as an engineer at Delft in 1897 and went to the South African Railway. Due to the Boer War he returned to work for the Dutch machine factory Stork until 1903 when he was appointed its Technical Agent for the sugar industry in Java. In 1905 he transferred to the Pekalongan Research Station as Technical Adviser before it was combined into the single Java Research Station, when he was appointed to head its Technical Division. (*Archief* 1926: 514-21)

Ir. J.C. Boot attended HBS at Breda and Rotterdam before studying from 1890-4 at Delft. He then worked at a Belgian chemical factory for a year before being employed by the American Sugar Refining Company to set up a laboratory at a molasses distillery in New York. In 1897 he was employed by the Klaten Plantation Company to direct its research station and work on the application of a white sugar processing method for which the Company had just bought the Java licence. This proved unsatisfactory but he found a successful method which was widely licenced and used in Java factories and elsewhere, including being a requirement for white sugar exports to British India. When other factories bought a licence to use the process he would assist them to set up for it, supplementing his manual. He returned to the Netherlands in 1907 to open an engineering advisory bureau and, on his request, was a private

lecturer in sugar engineering at Delft for three years until 1912. During this time he also travelled to investigate and provide professional advice in Cuba, Puerto Rico and Java. Still advising factories in Java about white sugar production he died there in 1914. (*Archief jubileumnummer 1918*: 13-5)

R.J. Bouricius, after the then 2-year agricultural training at Wageningen plus private science training and experience in a Dutch sugar factory, was appointed in 1889 Chemist at *Ketegan* then in 1890 Fabrication Chief, 1891 Assistant Field Employee and 1892 Head Field Employee. Subsequently he held other positions until appointed Administrator at *Soedhono*, in 1902, aged 31. From the early 1890s he was noted for his original researches into cane-crossing, producing several widely used new varieties. (*Archief 1905*: 388-90; *Archief jubileumnummer 1918*: 16-7)

J.G. Bronkhorst trained as a sugar chemist in the Netherlands including working during two campaigns there, started at an HVA factory as a chemist in 1916, was promoted to Fabrication Chief in 1920, became a Test Field Chemist for a year then a Field Employee for eight years until promoted to Administrator at another HVA factory in 1930, aged 34. After this was closed in 1934 he was transferred to be Administrator of a third, retiring in 1941.

Ir. B.M.A. Carp had been Delft-trained then worked at his family's Dutch beet sugar factory before starting in Java as a Fabrication Chief in 1889. After his three contracted years at *Balapoelang* in 1892 he moved to *Tjomal* as Fabrication Chief and was rapidly promoted to Field Employee then Under-Administrator. By then Van Musschenbroek, now Vice-Chairman of the Syndicate, had been Administrator there for nearly twenty years. In 1896 Carp was appointed Administrator at the nearby *Sragi*, in his late 20s.

V.C. Coster Van Voorhout, born and trained in a business school in Germany, arrived in Java in 1865 aged 19 and worked in the offices of a succession of banks and trading companies until becoming the agent of the new Colonial Bank in Surabaya in 1881 then its Head Agent when the main office was moved there from Batavia in the rationalising from the crisis. He was very active in the collective organisations of the sugar industry in the first decade of their formative existence, from being Chairman of the Surabaya Association of Sugar-manufacturers in 1892 at the time the *Archief* was being planned and instituted through several office-holding management positions in the Syndicate and the East Java Research Station. However, disagreements over the Bank's desire to have more technological expertise in its local management lead to his resignation in 1896, after which he set up his own management and sugar trading

business, including an unsuccessful attempt to organise a free sugar export market outside the current oligopoly of mainly 'English, German or Chinese exporters' and charter shipping to New York, defeated by a lack of access to local storage and available shipping. (*Archief* 1918: 1236-8)

Ir. C.G. Cramer, the son of a doctor who worked in Java, was trained as an engineer at Delft then worked as a government irrigation engineer in Java before becoming a politician there and in the Netherlands - including speaking strongly against colonial capitalist industry. Through his wife he inherited a seventh share in the *Somobito* factory and his son worked there. When the Netherlands was invaded Ir Cramer was in Asia on a tour with his wife and took over some of the management in Java. (Items related to *Somobito*, Cramer archive, IISG)

W.C. Dickhoff's father was the director of a Dutch sugar factory which failed then of another before becoming Fabrication Chief at a Java factory in the 1870s while his son stayed in the Netherlands for his secondary schooling then trained in a Belgian laboratory and as a Fabrication Chief himself. In 1883, aged 18, he started at a Java factory at a time when Java factories did not have laboratories or chemists but was soon Fabrication Chief at another and started to publish scientific articles and sharing his research interest with Arendsen Hein at a nearby factory. When Kobus, the first editor of the *Archief*, moved to be Director of the East Java Research Station Dickhoff was appointed to replace him, staying in that position for about 25 years. (*Archief* 1921: 1086-8; *Archief* 1928: 1266-71)

J. Dólleman started at *Karangsoewoeng* in the lowest European position of Weighbridge Employee for a couple of years from 1892 before returning to the Netherlands for about three years more experience and study. He then spent six years moving up through positions in NILM-related factories until appointed Administrator at *Balapoelang* in 1903, aged 29. After subsequently being Administrator at *Kemanglen* he retired to the Netherlands in 1916 and was Director and Board member of several Java sugar and other companies. (*Archief* 1940: 109-10)

D.C. Van Eibergen Santhagens was the second of three with the same name. He had earlier joined then replaced his same-named father as a "Hoevenaar Board member" before becoming the sole Director for about twenty years. Also Director of *Pangka* he moved from Board member to Director for *Sindanglaoet* (see their respective Annual Reports), and was on the Board of the JCM from 1921. In 1920 he had taken a leading

role in the negotiations with insurance companies to set up the industry's Joint Pension Scheme. (Minutes of the 8/1/1934 BENISO Management meeting; JCM 1940: Byl 1) [There had been other family connections with the sugar industry: In 1913 Elisabeth Ida Van Eibergen Santhagens (b 1883), married Ch J E Stok a fortnight before he started work with the Colonial Bank at a sugar factory, staying in service for 18 years before retiring in 1931 as Administrator of *Pradjekan* (Colonial Bank pension records. ARA KB. 2.20.05 Inv Nr 289).]

Q.A.D. Emmen, the OTH's Technical Adviser at the time of its electrification in the late 1920s, was an eminent sugar engineer who had already written and twice updated the major handbook on the industry's machinery and subsequently produced a fourth edition (Emmen 1918/1921/1926/1930).

H.C. Fabri trained as a mechanic at the Amsterdam School before working on the Dutch Great Canal project then starting at a Java sugar factory in 1891. He had worked his way up to Administrator at *Delanggoe* within about a decade, then at *Poppoh* by 1906, aged 36, while publishing technical articles. After ten years he returned to the Netherlands to be first a member of the Board then Director of the Watoetoelis-Poppoh Company for 22 years. (*Archief* 1940: 25-6)

Ir. J.J. Hazelwinkel, with a qualification from Delft and experience in a French distillery, from about 1892 worked as Fabrication Chief at *Doekoewringin* then *Tasikmadoe* before directing the Klaten Company's reorganised indigo research centre from 1897. After its closure he was appointed in 1904 as Under-Director of the West Java Sugar Cane Research Station and in 1908 as Director of the Chemical Division of the newly consolidated single Java Research Station. (*Archief jubileumnummer 1918*: 18-20)

W.F. Van Heukelom had started training in mining engineering at a Belgian university but discontinued this due to financial problems after his father's death and in 1879 came to work in the sugar industry in Java where his older brother was the Chief Agent of the NIHB (which financed several factories). In preparation he had spent a campaign at a Silesian beet sugar factory (and also gained a diploma as a mechanic). He started work at *Ngagel*, one of Von Bultzinglöwen's five NIHB-financed factories, and on the same private lands where the German company-owner Von Bultzinglöwen lived, before moving as a field employee to a larger NIHB-financed one then appointed to be Administrator at *Djaboeng*, aged 24 after only three years in Java. After about eight years there he was appointed as Administrator at *Bandjardawa* by the Java

Plantation Company which had just been set up by the NIHB's plantation offshoot, the NILM, to own and manage this and the other factories acquired from the indebted Von Bultzingslöwen estate. He stayed there for only two years before moving again to be Chief Administrator of the large NILM-associated Pamanoekan and Tjiassem private lands plantation complex for a decade. Then he returned to the Netherlands to be Director of both the NILM 1901-1920 and the Java Plantation Company 1901-1932, then a Board Member of the latter until he died in 1937, being succeeded as Director by his son. (Several sources including *Javasche Cultuur Maatschappij 1890-1940*: 10-11.)

E.C.J. Van der Horst, after training including volunteer work with the machinery manufacturer Stork and two sugar campaigns at beet sugar factories, was sent out to Java by the HVA to work in its factories. He was successively a Chemist for two years, a Fabrication Chief for three and a Test Field Employee for a year before becoming a Field Employee for four more years and then, after a total of ten years, an Administrator in 1925, aged about 33. Six months later he was transferred to bring a new HVA-factory into operation. After 7 years he was appointed in 1933 to administer and supervise three of the HVA factories which were inactive during the crisis and, finally, was appointed in 1938 as Administrator of the giant *Djatiroto* factory, the pinnacle of the HVA stable.

Mr. H. 's-Jacob, the first Chairman of the General Syndicate of Sugar Manufacturers, 1895-1903, was a legally-qualified member of the European Surabaya business community with multiple sugar-interests and previous active involvement in the industry, including setting up the East Java Research Station and the *Archief*. He was a part-owner of *Kabat*, a partner in the local Reynst & Vinju management company, and later a member of the Peoples' Council.

E. Kersten was born, trained and with machine factory experience in Germany before working a campaign in a Dutch sugar factory where, it is claimed, he first heard of Java. He came to Java in 1881 as one of the first post-secondary school-trained engineers - for the initial two months as a Second Mechanic at a Fraser Eaton-related factory then as a First Mechanic at another factory - *Ngagel*, the same German-owned NIHB- then NILM-financed factory where the engineering part-trained Van Heukelom had been worked in 1879. While there he designed a new oven and published several technical articles. Appointed as Technical Adviser of the NILM in 1886, a year later he moved to be the Java Representative of the German Halle Machine Factory and Foundry, which designed and supplied equipment and complete installations to the

Java sugar industry. He returned to Germany after nearly a decade to be, first, Chief Engineer then, in 1901, Director of that company. (*Archief jubileumnummer 1918*: 21-2)

Dr. J.D. Kobus won a scholarship after an outstanding secondary schooling to study in Germany as a preparation to be on the staff of the newly established Dutch Agricultural Research Station at Wageningen. After these studies and visits to other research centres he worked for five years there and qualified as a scientist. After a year in a Delft chemical factory he was appointed Under-Director of the new East Java Research Station in 1887. He was the founding editor of the *Archief* in 1892 and Secretary of the new General Syndicate from 1895 before becoming Director of the Research Station in 1897 until his death in 1910 - although sick for about the latter half of that time. (*Archief jubileumnummer 1918*: 23-6; *Archive 1925*: 337-9)

Ir. Liem Ghik Djien, educated from kindergarten to Delft in the Netherlands, was under-Administrator at *Redjoagoeng* then Administrator of *Krebet* after this period.

J.F.A.C. Van Moll trained at the Amsterdam mechanics' school before working at the Stork machine factory, on a wood-boat to Norway and in a Dutch sugar factory. At age 18, he came to Java with his older brother in 1891 and soon started work as a Fabrication Chief at one factory then moved to another in 1895, having already produced the first table for chemists to calculate sugar concentrations (Van Moll 1894). For a short time he left factories for well-drilling, but returned to sugar to be a Second then a First Mechanic. Within a couple of years he had moved up into Field Supervisor positions at three successive factories before transferring to *Tjomal* where he was also Secretary of the General Syndicate while his Administrator, S.C. Van Musschenbroek, was Chairman. He continued to publish many articles on a variety of technical and other topics. When this period finished in 1907 and Van Musschenbroek retired to the Netherlands, Van Moll was appointed Administrator at *Badas* until he repatriated in 1914. (*Archief 1924*: 691-6)

S.C. Van Musschenbroek, who had started training as an engineer at Delft then, for family financial reasons, transferred to military officer training for a while before going out to *Tjomal* in 1878 and working there for four years in various positions. He was related to the Teding Van Berkhout family, co-owners of *Tjomal*. He then returned to Europe for a couple of years of experience and the most advanced training then available, including at the leading German Sugar Laboratory and School, before being appointed *Tjomal*'s Administrator in 1884. He stayed there, managing, experimenting

and training for nearly thirty years. In this time he became one of the most distinguished and influential managers and educators of Administrators and other employees in the Java industry. He acted as Superintendent for NHM and International sugar factories and, from 1903-1907, was the second Chairman of the General Syndicate of Sugar Manufacturers - while continuing to work as the Administrator of *Tjomal*. After repatriating in 1907 he took up various business interests including being Director of *Tjomal*'s company from 1908 until his death in 1914. (*Archief jubileumnummer 1918: 27-33*)

J.J. Nederburgh trained at the Amsterdam Secondary Technical School's Civil Engineering and Sugar Technology section before starting at *Sindanglaoet* as a Chemist in 1900, aged 18. He moved between factories in working up to be Field Supervisor, then was appointed First Employee at *Djatiwangi* after thirteen years and Administrator there after twenty, staying in that position for another eight. (*Archief 1940: 169*)

E. Rombouts had managed the workshops of the private N-I Railway Company before being appointed as Inspector of the NHM sugar enterprises in 1877 (Knight 1997: 22 and fn.92). Subsequently he was the Administrator and part-owner of the short-lived *Ardjowinanggoean* factory in Rembang (HCHO 1888), later being appointed a Director in the Netherlands for the new company owning *Tjomal* from 1898-1907 and succeeded by its ex-Administrator Van Musschenbroek.

C. Van Senden was first appointed an Administrator at *Peterongan* in 1909, with a more experienced nearby Administrator paid f.150/month to provide supervision and advice. By 1914 Van Senden was providing a similar support to another new Administrator at a related factory. He was appointed Superintendent of all the sugar factories managed by Tiedeman & Van Kerchem in 1921, subsequently moving to the Netherlands and becoming Director of, inter alia, *Peterongan*'s company.

Sie Swie San trained at the Surabaya Queen Emma technical school before starting and working up as a Second Mechanic successively at the Oei Tiong Ham factories *Redjoagoeng* from 1924, *Pakkies* from 1928, and *Ponen* from 1929 until it last milled in 1933. He was then moved to China to be chief engineer at the new OTH-related alcohol factory in Shanghai before managing a sugar factory in Canton. After the Canton factory was bombed by the Japanese in 1938 he returned to the tapioca factory at *Krebet*, as a Second Mechanic again.

J.F.W. Van Vloten graduated from the Wageningen Higher School in 1888 and went to Java in 1889, nominally as the Book-keeper at a sugar plantation where the factory was still a hole in the ground. As the single Mechanic there had no technical training or ability to read drawings Van Vloten joined in building the factory with the equipment delivered to the site, and the factory started milling the next year. From the year after that, he was Chief Field Employee for two seasons until, aged 26, he was appointed to be Administrator at another, still primitive, factory, *Kloerahan*. He managed two campaigns there, with the second on request of the owners of the adjacent *Pleret* who had bought and were then to close his, keeping the planting concession. After this he was appointed in 1895 to a partly-established new factory with the same owners, *Sempalwadak*, where he stayed as Administrator for nearly thirty years, introducing many innovations and trials on behalf of the industry, later notably repeatedly in mechanical ground-working. (*Archief* 1924: 126-36)

W. De Waard, after Dutch upper secondary schooling, studied at a German sugar school and worked first as a chemist at a Dutch sugar beet factory then as Technical Agent of the sugar industry machine factory *Werkspoor*. He also published in the *Archief* and elsewhere then, after nearly a decade, returned to the Netherlands, back into *Werkspoor* where, inter alia, he designed new Java factories and, in 1903, was appointed as director of the Rose-family's new company which owned its *Kremboong* and *Toelangan*.

H.W. Wegman was Administrator of the Colonial Bank's *Gending* before being appointed as its first Superintendent for its coffee and sugar estates in 1895. Nearly two decades later he was a Bank Board member for about five years until he died in 1917.

Dr. H. Winter, after studying at several German schools and universities, worked and studied at one of the German sugar laboratories. In 1886 he was appointed to the new West Java Research Station then, after personal differences, moved to the Middle Java Station. In 1891 returned to Germany to complete a PhD on a topic he was studying in Java, then came back as Adviser to Fraser Eaton & Co. For several years he supervised the chemical and technical work in their factories, introducing several important technological innovations in processing, supervised and developed new methods for the sugar trading Fraser Eaton's sugar testing services, and published in the *Archief* which he helped found before returning to Germany in 1899. (*Archief jubileumnummer 1918*: 31-3)

Ir. (later Dr.) Yap Kie Ling and **Ir. Yap Kie Tjwan**, brothers, had both studied at Delft, graduating in 1925 in electrotechnical engineering and chemistry respectively, then starting at OTH's *Redjoagoeng* and *Krebet* in 1926 - as normal "at the bottom" as second mechanic and chemist. The former moved to *Krebet* as a chemist then replaced Ir Emmen as overall OTH Technical Adviser in 1930/1 then, with the cutbacks in 1934, replaced the European, Ir. Van Nes, as Chemical Adviser as well. After the war he became managing director of all the OTH sugar operations, succeeding Dr Djie Ting Ham who had moved to the Netherlands. The other brother was gradually promoted up to Administrator at the *Krebet* sugar (and tapioca) factory. (Gema 1956; Kunio 1989: 154-5).

APPENDIX 9 ADMINISTRATORS FROM OWNING FAMILIES⁵⁷³

This list should be treated with caution and as an under-estimate as the obvious method of identification by same family name (or known marriages) could be misleading. Before the listed names of owners disappeared behind the names of companies, usually after the mid-1890s, it was easy to see cases in which factories' Administrators were also owners or part-owners. However, these cases underestimate the total both as they would include only founders and direct male descendants of inheriting families while sons-in-law would not be apparent by name. There were also cases of family connections in which an Administrator was a member of the family of which other differently-named members did own or part-own it. Moreover, owning-family names occasionally re-appeared in later periods.

Owning-family Administrators included: Several Aments, including at each of three of the then four "Ament" factories in 1896; C W Anthonijs *De Goed Hoop/Pengkol*, late-1880s); A.L.M. Bekking (*Djatie*, late-1880s); J.H. Van Blommestein (*Wonopringgo*, late-1880s); H.H. Borel Jnr. (*Klaling*, late-1880s); H.M.E. Van der Brandeler (*Pohdjedjer*, late-1890s, then *Kenongo* for a few years about 1908); several Dezentjés at "Dezentjé" factories all through the period; G. Eschauzier (*Gempolkrep*, late-1880s); H.J. Eschauzier (*Poerwasrie*, late-1880s); P. Eschauzier (*Tangoenan*, mid-1880s); W.G.J. Eschauzier (*Ketanen*, late-1890s); several Eschauziers at *Sentanenlor* late C19th to early C20th; L.Th. Gonsalves (*Tjiledoek*, late-1880s); Han Ho Tjoan (*Pleret*, 1880s, then *Pengkol* from 1890s); Han Hoo Tong (*Pleret* from the 1890s); Han Kong Gie at *Soekoredjo* (late C19th to C20th); Han Ting Tjoen (*Tangoelangin*, mid-1890s); Han Tjouw King (*Pengkol*, from about 1908); C.G. Harvey (*Wonoaseh*, late-1880s); Jong Lan Soei (*Panggang*, late-1880s); Kwee Keng Eng (*Kalitjandong*, mid-1890s); Kwee Keng Lim (*Djatipiring*, 1890s); Kwee Liang Thaij (*Grati*, late-1880s); Kwee Sik Khie (*Kawis-redjo*, late-1880s); G. Lebret (*Kedawoeng*, mid-1890s); Lim Tik Kwie (*Koedjonmanis*, mid-1890s); L.J. Lionarons (*Sedatie*, 1890s); I.J. Lucas (*Baron*, mid-1890s); D.F.W. Lucassen, later P. Lucassen (*Doekoewringin*, late-1880s, mid-1890s); J.H.L.E. Van Meeverden (*Kanigoro*, late-1880s); W.A. Meijer (*Bandjoepoetih*, 1890s and after); H.C. Nering Bögel (*Pakis*, late-1880s); Ong Djin Kin (*Gondrirodjo*, late-1880s); J. Pabst (*Blimbing*, late-1880s); D.F.W. Pietermaat (*Maron*, mid-1890s); F.A.C. Van der Broek d'Obrenan (*Poegoe*, late-1880s); A.J. Prager (*Bangsai*, late-1880s); E. Rombouts (*Ardjowinanggoen* [in Rembang], mid-1880s); A.M. Sarkies (*Krebet*, the late-1890s); W.G. Semster (*Beran*, 1890s and after); J.W.A. Van Soest (*Kalibagor*, late-1880s); Ch.H. Staring (*Joso-*

⁵⁷³The names were taken from HCHO 1888, the series of General Syndicate handbooks of factories from 1895, and company or factory records where available.

wilangon/Kaliteloe, late-1880s); Tan Boen Tjing (*Ardjosarie*, from the 1880s); Tan Tian Gwan (*Maibet*, late-1880s); Tjoa Tjwan King (*Ngagel*, early C20th); Valkenhoff (*Krebet*, mid-1890s); W.O.J. Verschueren (*Panggoongredjo*, turn of the century then *Papoh*); W.G. de Voogt (*Kadipaten*, late 1890s); G.M.W. Zuur (*Djatiwangi*, 1880s to 1890s, followed by other Zuurs).

APPENDIX 10 APPARENT "ADMINISTRATOR FAMILIES"

Adam (father L., his sons A.R., H.V., and H.R. respectively at: *Tandjong Sarie* then *Pandjie* from the 1890s for well over a decade; *Pandjie* by 1920 following another Administrator after his father; *Randoe Goenting* during the 1920s decade; and *Toelangan* for about a decade during the teens, his daughter marrying another Administrator);

Ament (G.A., H.B., and T.D.S.A. at the adjacent "Ament's sugar factories" *Glagamidag*, *Gempol*, *Ardjowinangoen*, and *Paroengdjadja* round the turn of the century);

Ball (A.H. and Ch.F. following each other through *Redjoagoeng* and *Tjandie* over a decade apart);

Van der Broek d'Obrenan (Ch., E.F., and F.A.C. in the nearby Kendalsche family-related factories *Gemoe*, *Poegoe* and *Tjepiring* round the turn of the century);

Broese Van Groenou (W.Jr. at *Tandjong Tirto* in the mid-teens [W.Snr. had been listed as the owner by 1890]; A. at *Petjangaan* also in the mid-teens; and J. who died in 1911, "in life Administrator of the sugar factory *Djatie*");

Cherix (P. at *Krian* in the late 1880s then *Modjo* for a decade from the 1890s, W.F. at *Gempol* by 1905, J.M. at *Ketegan* by 1930);

Dezentjé (B.J., C.E., D.A.A., H.A., J.A.Hzn., and B.J.Gzn. at the associated cluster of "Djoengkare" factories near Solo in years from before the end of the last century until at least into the 1920s);

Dinger (J., L.C., Mevr. L.C., Ir. R.J. and O.N.J.C. at the family-related factories of *Kenongo* and *Modjopanggong* from the teens to the thirties);

Dom (P.M. and J.G. at *Bantoel* from the nineteenth to the twentieth century);

Enger (G.F.Jr. and W.J. at the G.F. Enger Sr.-owned *Tjebongan* from the 1890s for over a decade);

Eschauzier (A.C.A., F., G., H.J., H.S. and W.G.J. at the cluster of "Eschauzier" factories around Modjokerto during the end of the nineteenth and the early twentieth century);

Gessner (J.F.L. and J.Ch.P. following each other at *Randoe Goenting* for well over a decade from the mid-1890s);

Han (eight names, including Ho Tjoa, Ho Tong Tiauw An and Tiauw Kheng/Tjouw King at *Pleret* from one to the next century and at *Pengkol* from the 1890s to well into the 1920s);

Imminck (three, including W.F. and W.Th. at *Petjangaan* for well over a decade from the mid-1890s);

- Karthaus** (six, including W. and E.J.W. at *Gondang Lipoero* for a decade from the mid-1890s);
- Knoops** (four, including F.J. and J.H. for over a decade into the new century at *Triagan*, and F.J. Jr. at others);
- Kwee** (eleven, including Keng Liem and Swan Hong at *Djatipiring* for nearly thirty years from the mid-1890s and several others at small family-owned factories which closed by early last century);
- De Lange** (B.F. followed by W. at *Seboroh* for two decades from the mid-1890s, B.F.Jr. at *Kaliwoengoe* early last century, and H.R. at *Ngandjoek* for over a decade from before 1908 until at least 1920);
- Lim** (or Liem/Lie, seven including Tik Kwie, Boen Tioe, Tik Koey and Djeng Han at *Koedjomanis* from the nineteenth century until the 1930s, King Pwee and Djeng Tjaj at the related *Baron* for over twenty years from early last century);
- Marx** (A.G.J. for a decade at *Balongbendo* then succeeding his brother J.A.K. at *Ketegan* for eighteen years until 1906);
- Muller von Czernicki** (O. at *Poerwodadi* for a decade from about 1904, O.L.A. briefly at *Kawarassan* until he died in 1912, and P.J. at *Soemobito* by 1922);
- Van Musschenbroek** (S.C. at Tjomal 1878-1907 then, briefly, P.E. in 1918);
- Pijnacker Hordijk** (Mr. F.W. and G.J. at *Bantoel* and part-family-owned *Beran* briefly in the teens);
- Schroder** (F.H. and H.F. successively at *Poerwokerto* for over a decade from early last century);
- Souw** (Soen Liang, Wia Tio and Hway Tien for over twenty five years from the 1890s at *Panggang*, owned by the first-named);
- Tan** (ten, including Boen Tjing and Tjwan Hok at *Ardjosarie* for about forty years from the 1880s, Boen Liang and Tjwan Soen for about twenty years from early last century at the similarly family-owned *Soemengko*, Khoen Hian and Boen Tjiang successively at *Ponen/Plosso* from the 1890s into last century);
- De Vletter** (A. and Th.G.J. successively at *Wonopringgo* for over a decade from early last century);
- Vonck** (four, including E. and L.C., the former at *Tjeweng* in 1888, the latter there nearly forty years later);
- Zuur** (G.M.W., F.A. and W.F. who were almost continuously at the family-related *Djatiwangi* from the 1880s to the late teens).

(The list was constructed from the repeated surveys of all factories published by the Syndicate from 1895, earlier lists published in the Handbook of Dutch Indies Plantation and Trade Companies series [*Handboek voor Cultuur- en*

Handelsondernemingen in Ned.-Indië, HCHO], "Personalialia" in the *Archief*, company records and commemorative histories, and incidental sources.)

APPENDIX 11 SOME POST-ADMINISTRATOR CAREERS

Post-Administrator careers included those of:

- J.M. Acket** (*Gempolkrep*, the largest owned by the "Eschauzier" company) subsequently appointed (as usual for the Administrator of this factory) as the Java Representative of the company, in Modjokerto;
- G.A. Ament** (*Gempol*) becoming a Director of its family-owned Ament's Sugar-factory Company in Cirebon;
- T. Van der Ben** (*Paroengdjadja, Kadipaten*) becoming the Superintendent of NHM sugar factories, subsequently moving to the Netherlands and being on the Boards of several sugar-mill companies;
- J.H.L. Andriessen** (*Phaëton*) becoming Representative of the companies owning *Klampok* and *Peterongan*;
- J.L.F. Bianchi** (*Kentjong*) retiring to senior administrative work in Den Haag, subsequently becoming Mayor of Geertruinberg;
- Ir. A.G. Boeseken** (*Delanggoe*, owned by a company in the Klaten Plantation Company group) becoming a Director of the latter company and an active office-holder in BENISO, including inspecting courses it subsidised;
- C. von Bornemann** (*Barongan*) becoming a Board member of the *Reweoloe* and *Sewoegaloor* company;
- W. Broese Van Groenou Jr** (*Tandjong Tirto*) moving to the Netherlands to succeed his father as Director of its family-company and be on other plantation company boards;
- B.M.A. Carp** (*Sragi*) being appointed Superintendent of the NHM sugar estates in West Java, then repatriating and became a *Paggotan* Board member;
- H. Costerus** (*Gempolkrep*, owned by the Eschauzier company) moving, as usual, to be the company's Java Representative then becoming a Director of *Tangoenan's* Den Haag owning company;
- A. Van Delden** (*Gesiekan*) moving into tobacco after 1877 then retiring into "Djokja society", becoming a *Koning Willem II* Board member;
- H.A. Dezentjé** (*Karang-anom*) being later Director of the Dezentjé family-company;
- J. Dinger** (*Modjopanggoong*) becoming a Director of its company and of the *Kenongo* company, both Dinger-owned and in Batavia, with O.N.J.C. Dinger (*Kenongo*) replacing him as the latter's Director;
- J.J. Doffegnies** (*Peterongan*) becoming Director of the *Gayam* and *Panggoonredjo* company;
- J. Dölleman** (*Balapoelang, Kemantren*) repatriating and becoming a Director of the Sugar Plantation Company (Suikercultuur Mij; owning *Kemanglen, Balongbendo,*

Krian and *Soemberkareng*), on the Boards of the Hoevenaars' *Karangsoeweng*, *Adiwerna* and *Djatibarang* Operating Company and of the separate companies for *Pangka* and *Tjebongan*, on the Board of the NV Nederlandsch-Indische Industrie from 1918-1931 and of the Ned.-Ind. Spiritus Mij;

H.F.K. Douglas (*Gending*) becoming a Board Member of *Somobito*'s company;

Ir. L. Elfrink (*Bangsai*, an Eschauzier factory) unusually, as not from *Gempolkrep*, becoming the Eschauzier company's Modjokerto Representative;

P. and W.G.J. Eschauzier (*Gempolkrep* and *Ketanen*, *Sentanenlor* respectively) subsequently being Directors of the "Eschauzier" N-I Suiker-Unie which subsumed both the family's *Sentanenlor*, *Brangkal en Dinoyo* Operating Company and the associated *Bogokidoel* et al Company (between being an Administrator and a Director, P. Eschauzier had been Superintendent of the Eschauzier factories);

H.C. Fabri (*Delanggoe*, *Poppoh*), returning to Europe to be on the Board of the *Watoetoelis-Poppoh* Company (from 1918 its Director), an office-holder in BENISO, its delegate in examinations for sugar chemists and technicians and looking after questions in sugar technology patents;

W.F. Gaymans (*Gempolkrep*) following the pattern by becoming the Java Representative of the Eschauzier company;

W.F. Van Gennep (*Klatjie*) becoming Representative of the A B Kraag-heirs' *Gedaren* company, in Djojka;

W. Hasselman (*Ketanen*) becoming Director of *Bantool*'s owning company;

H. Hieronimus (*Garoem*) becoming Director of *Somobito*'s company;

C. Van Holst Pellekan (*Bandjaratma*, *Ranoegoenting*) becoming the Colonial Bank's Superintendent of sugar factories;

Kwee Swan Hong (*Djatipiring*), one of the brothers later inheriting it;

C.H. Jeltes (*Bagoe*) becoming the Java Representative of the *Pradjekan-Tangarang* company then a member of its Amsterdam Board;

Jhr. P.H.J. Lawick (*Balongbendo*, owned in his family) moving onto its Board;

S.C. Van Musschenbroek (*Tjomal*) immediately being appointed as the Director of its company;

J P. Nieuwdorp (*Kanigoro*) becoming the Colonial Bank's Superintendent of factories;

H.T.P. Obertop (*Delanggoe* [private], *Modjoagoeng* [NHM]) becoming NHM's Malang Superintendent;

G.J. Pijnacker Hordijk (*Beran*, owned by his family) becoming a Director of its company;

J.J. Ramspek (*Kanigoro*) becoming the Colonial Bank's Superintendent of factories;

E.A.W. Van Riemsdijk (*Trangkil*) becoming Director of its owning company and of *Tjomal's*;

E.K.G. Rose (*Kremboong*) retiring to the Netherlands to become Director of the two family-owned factories, in 1903 becoming President of the Den Haag company set up for them;

C. Van Senden (*Peterongan*) becoming Director of its Amsterdam company;

Jhr. M.G. de Seriére (*Tangarang*) becoming Director of the *Pradjekan-Tangarang* company;

P.J. Stok (*Rewoeloe*) later Chairman of the Board of the Braat machine factory in Surabaya;

Baron R. Thoe Schwarzenberg en Hohenlandsberg (*Karangsoewoeng*) becoming Director of the Aments' Sugar-factory Company in Cirebon;

Souw Soen Liang (an owner/Administrator of *Panggang*) continuing as an owner;

K.J. Staverman (*Modjo*) becoming NHM Superintendent for its West Java factories, then a Director of *Tjomal's* company and of the Wonolongan Plantation Company (owning *Oembel*, *Wonolongan* and *Wringinanom*);

Tan Boen Liang (an owner/Administrator of *Soemengko*) continuing as an owner;

Tan Boen Tjing (owner/Administrator *Ardjosarie*) continuing as Director;

C. Thurkow (*Rendeng*) representing the family Klaten Plantation Company;

P.A. Uhlenbeck (*Sroeni*, *Tegowangi*) becoming a Director of the Wonolongan Company;

W.C. Uhlenbeck (*Poerwodadi*) becoming a Board member of the company owning *Somobito*;

Ch.N.W. Veenstra (*Wonosarie*) becoming the Colonial Bank Djokja Superintendent, then its Surabaya Superintending Agent, later a member of the Amsterdam Boards of *Gending*, of *Medarie*, and of *Kanigoro* (the operations of all of which he knew well from his previous Agent's activities);

C. Visser (*Sedayoe*, *Demak-Idjo*) going on the Board of *Sewoegaloor* and *Rewoeloe*;

G.C. Vonck (*Watoetoelis*) becoming the Director of the company owning *Peterongan* and *Kebon Hardjo*;

A.Voskuil (*Sentanenlor*, *Gempolkrep*, *Eschauzier*) as usual becoming the Representative of the company in Modjokerto but, unusually, then a Director;

F. Vrins (*Sindanglaoet*) becoming its company Director;

Ir. J.E. Waterman (*Watoetoelis*) becoming a Board Member of *Somobito's* company;

H.W. Wegman (*Gending*) becoming the first Colonial Bank Superintendent of its sugar factories then a member of the Boards of the Bank and of the *Pradjekan-Tangarang* company;

G.J.H. Westenek (*Tirto*, *Poerwordejo*) becoming a Director of *Tjomal's* company;

J.L. Wijn (*Petaroekan* 1921-1939) going on the Board of the JCM, its owning company;

F.A. then W.F. Zuur (*Djatiwangi*) being successive Directors of its family-related Bandoeng company.

As cases of Administrators simultaneously holding other positions, **L.K.P. Münch** (*Kemanglen*) and **J.A. Platte** (*Winongan*) were on the incoming Board of the Twente Trading Company (*De Twentsche Handel Maatschappij*) - on its new reconstitution in 1921 from the 1902-founded De Rooij & Co (*De Indische Courant* 19/10/21).

APPENDIX 12 CASES OF FAMILIES IN MANAGEMENT IN THE 1930s

- As well as P. and W.G.J. Eschauzier being Directors of the factory-owning company, by 1934 E. Eschauzier was Representative in Java for the Eschauzier factories, and by 1937 Mr. P.C.L.E. Eschauzier was on the committee of the BENISO-backed Curators of Funds for the Indological Faculty at Utrecht.⁵⁷⁴
- The Birnies' part-owned *Pradjekan* and *Tangarang* had a largely family Board with the Director's Delegate in Java a succession of Birnies; D., J.W., then Ir. J.W. Birnie who also headed the Anemaet company which managed several other factories.
- The Administrators and Director of the Dinger's *Modjopangoong* and *Kenongo* from the mid-teens included a succession of Dingers; J., Mevr. L.C. and O.N.J.C., then Ir. R.J. Dinger who moved in the early 1930s from being First Employee at *Tjomal* to be Administrator at *Modjopangoong*.
- In succession G.M.W., F.A. and W.F. Zuur were Administrator then Director of the Zuurs' *Djatiwangi*.
- The Blanckenhagen's *Djatie* had A.J. Blanckenhagen as Director.
- In the late 1920s the Administrator, the Chair and another member of the Board of the Enger family's *Tjebongan* were all Engers.⁵⁷⁵
- The Pijnacker Hordijks' *Beran* had a Director, ex-Administrator, and Board member from the family.
- *Tandjong-Tirto*'s Director and Board continued to be dominated by successive members of the owning Wieseman and Broese Van Groenou families.⁵⁷⁶
(There were continuing personal connections between these three family-owned Principalities factories.)⁵⁷⁷

⁵⁷⁴ BENISO 1934: 19; 1937: 11. The faculty had been founded as a training and political centre to compete with Leiden's with continuing advocacy and financial support from the major colonial capitalist interests as "there was too much influence of Leiden professors, of adat and of the government compared to entrepreneurs" (*Ind Crt* 14/4/1925).

⁵⁷⁵ It had been owned by G F Enger Sr in the 1890s when G F Enger Jr administered it. By 1908 it had been put into a company and had been administered by W J Enger for a decade. For a few years in the teens a non-Enger was Administrator until a third G F Enger had taken over and continued.

⁵⁷⁶ W Broese van Groenou, Director from 1924, had previously been the First Employee for nearly three years then Administrator for ten. He had also been the family company's Representative for seven years, up to and including his time as First Employee, before this authority had been delegated to Internatio.

⁵⁷⁷ Eg. J G Dom, the interregnum non-Enger Administrator of the *Tjebongan*, was also Representative of the Wiesemans' nearby *Bantool* where he had previously been Administrator, succeeding another Dom and followed by a Pijnacker Hordijk who was simultaneously the company Representative of the Pijnacker Hordijk family-owned *Beran*, also nearby. *Beran*'s

- *Gending* had the Colonial Bank as its Director. Until it fused with *Maron* in 1934 its Board continued to comprise only representatives of its major shareholders, the Colonial Bank, Internatio and first, Mevr. à Brakel-Reiger-Horst, then her son-in-law B.J.H. Haitink and finally his son Mr. W.H.L. Haitink.
- By the late 1930s the *Doekoewringin* Board, as well as Lucassen owning-family members (including a Van Lennep) and their representatives, included P. Eschauzier as a shareholder (as was J. Dólleman) with A.A. Paauw representing the NHM as Director.⁵⁷⁸ Before planting started in 1939 the Board considered and rejected an offer from the Board of the Hoevenaars' *Karangsoewoeng* to buy *Doekoewringin* for the sake of its production share.
- In 1920 the firm of E. Moorman & Co was set up in Amsterdam to take over the assets of the long-standing company James Barge and E. Moorman & Co which had been in liquidation and operating under management for years. Its main assets were the sugar factories *Djombang* and *Pandaän*, plus a coffee plantation administered by E.G.J. Moorman. H.E. Everard was one of its two founding Directors, L. Everard one of the six Board Members and F.Th. Everard had already been Administrator of *Pandaän* for fifteen years. There were also other long-standing connections between these and other companies.⁵⁷⁹
- Mr. F.W. Des Tombe, the Director of *Tjomal* and a member of one of its owning families stayed there for the 1935 campaign, F. Des Tombe was on the staff from 1932-5, and in 1939-40 A.F.A. Des Tombe arrived and was put on the staff as a Representative of the Directors in the Netherlands as war loomed there.
- By 1937 D. De Vogel had come up to be First Employee at the De Vogel family's *Kadipaten*.⁵⁸⁰
- G.C. Vonck, an ex-Administrator, was both part-owner (with P Buwalda and the NHM) of *Peterongan*'s company and its Director from its 1908 foundation until

then-Administrator, also a Pijnacker Hordijk, later became its company's Director with another family member on its Board. A more senior member of this owning family was also on the Board of the Wieseman and Broese van Groenou families *Tandjong Tirto*, in the same area.
⁵⁷⁸ Paauw was an NHM Director, until 1930 in charge of the NHM's section for plantation affairs at its Batavia Factory -and the only Director from this route.

⁵⁷⁹ Twenty years previously H Everard had been the Director of and largest shareholder of *Tjoekir*, close to *Djombang*, before moving to the Netherlands in 1900 "to look after (its) investments there". Later, after the seat of *Tjoekir*'s company was transferred to the Netherlands he became one of its two Board Members, with H L Vinke. Vinke was the other founding Director of the new Moorman company. Another *Djombang* Board Member was Ir J R A M Schmutzer, previously the long-serving Administrator and owning family member of the small *Gondang-Lipoero*, which made some joint planting and production share arrangements with *Djombang* in the late 1930s.

⁵⁸⁰ With overt concerns about apparently providing him with conditions any better than the normal so standard JSWB policies were closely stuck to (ARA 2.20.08 Kadipaten. Personeel, Inv Nr 238 Director's letter 8/3/1933).

1923 when, for health reasons, he had retired to become a Board Member, the Directorship going to C. Van Senden, a previous Administrator of the factory. Vonck had died in 1926 and his Board position had been taken by one of his sons until the NHM bought the rest of the company - with a financial bonus to its upper management.⁵⁸¹ The other son had gone on the Board of *Klampok's* company, of which Van Senden was also Director until its liquidation, which he arranged, in 1935.

- G.C. Vonck had also been part-owner and Director of the unsuccessful *Kebon Hardjo*, again with P. Buwalda as a major shareholder and Board member:⁵⁸² From 1914-7, not long before it had closed, W.Ch. Buwalda was its First Employee, once temporarily acting as Administrator.
- The Dezentjé family was exceptional in the extent of its continuing to work in its factories. Counting only those in the direct male line, in 1930 four of the fourteen employees at one of its three factories were Dezentjés, as were five of the twenty two at another and three of the eighteen at the third. They were spread across the ranks: two of the Administrators; an Under-Administrator; a Chief of Planting; and, at one factory, three of the five field supervisors, including one with an engineering degree, were in the family as were a first chemist, a third mechanic and a weighbridge supervisor.⁵⁸³
- In one example of a non-owning management family, W.F. Van Heukelom, an ex-Administrator, was Director of the NILM from 1901 to 1920, and of the Java Plantation Company (JCM) for thirty one years until 1932 and then on its Board until his death in 1937. His elder brother H.P. Van Heukelom had been the Chief Agent, in Batavia, of the Dutch Trading Bank (NIHB), the parent of the later

⁵⁸¹ The Peterongan company continued separately until 1929 when the NHM, which had been a minority share-holder, bought all the remaining shares and took the positions of Director and Board members inhouse. Prior to this the other two Board members had been NHM Directors (Van Aalst and Guépin), but apparently as individuals. By statute the Director was paid 3% of profits before then 6% after 1920 plus an increase in salary to f.10,000, while the Board Members jointly also received 6%. In 1929 "to compensate them for loss of income" on their resignation as Director and Board members respectively Van Senden, Van Aalst and Guépin were paid f.140,000, f.80,000 and f.80,000 by the NHM, as agreed by the NHM Director - Van Aalst (ARA 2.20.01 NHM [Peterongan archive] Inv Nr 12079 [Material on the 1929 take-over], 12081 [Board minutes book]).

⁵⁸² With Van Eeghen & Co as well as the NHM as financiers. He was Director from its optimistic founding in 1911 through its increasingly loss-making existence until 1918 when the NHM (which had become as its major financier and creditor) took over all shares, Directorship and Board membership of the company before liquidating it (ARA 2.20.01 NHM [Kebon Hardjo archive] Inv Nr 11581 [Statutes], 11582 [Board minutes book], 1285 [Annual reports]).

⁵⁸³ 1930 Adresboek: 75, 165, 170.

NILM, when he had started in the Indies at an NIHB-financed factory. His son, Mr. F.H. Van Heukelom, was the NILM's Surabaya Secretary in 1922 then the Directors' Secretary in Amsterdam, before having been a Director of the JCM with his father from 1924-8, its NILM Representative in Surabaya for 1928-32, then its sole Director. Another Van Heukelom, W.E., was the NILM's Surabaya Representative 1915-19).

- Three successive D.C. Van Eibergen Santhagens were involved in upper management. The second was the major figure, with wide and central involvements. The tradition was obviously continuing with the third, a 1925 graduate of the Amsterdam Secondary Technical School. In 1932 he was taken to Java by his father after the latter had disagreed with the NIHB/NILM's policy against the Chadbourne Plan restrictions. The trip was to arrange the changing of financing and representation from the NIHB/NILM to the NHM/Kooy of the five factories the father directed, with the son remaining in Java for some weeks to complete the arrangements.
- The Soerabaja representation of *Tjeweng's* company by Mr. J.W. Ramaer, also Vice-Chairman of the Syndicate who then moved to the Netherlands and was the first Chairman of BENISO, was passed on to his son-in-law, P. Feenstra. The latter was also Director of the Soerabaja company owning *Lestari* and later, when the two companies had been combined and reseated in Amsterdam, on the Board.
- K.J. Staverman worked up to be Administrator of *Modjo* and was later Director of the Wonolongan Plantation Company and of *Tjomal's*. These companies shared an office and Secretary in Den Haag with *Kadipaten's*, the Secretary previously having been assistant then book-keeper at *Tjomal*. Further Staverman family connections in the industry are suggested by another K.J. Staverman starting at *Tjomal* as an assistant mechanic in 1928; B.A. Staverman being Administrator at *Kadipaten* from 1930, possibly also teaching for a while at the Amsterdam Sugar School previously; W.H. Staverman being Secretary of the Colonial Bank-related *Pradjekan-Tangerang's* company in 1930; and P.E. Staverman resigning as Head Agent of the Colonial Bank to head the Java industry's new export licensing board in 1931.

APPENDIX 13 PROPORTIONAL REDUCTIONS OF FACTORY NUMBERS ACROSS COMPANIES

- The decisions made about the Java Plantation Company's five factories are an example of the management options available to companies owning several. The management decided that *Bagoë*'s 1930 planting would be its last and the factory would close down after milling in 1931; *Bandjardawa* was closed in 1932 but some planting continued; the 1932 planting for two of its three other factories was reduced but not for *Petaroeakan* which, however, used the planted part in the nearby *Bandjardawa* concession instead of some less productive land in its own; in 1933 no crop was put in at *Perning* and the factory closed after the campaign, leaving only *Petaroeakan* and *Pesantren* operating in 1934; their 1934 for 1935 plantings were cut back; there were no plantings in 1935 so neither milled in 1936 but both planted; from 1937 they stayed in operation, *Petaroeakan* expanding by milling from the part of *Bandjardawa* now being operated as a cane estate. Given the reduction of plantings and thus of operating scale and efficiency provided by the new production licensing in 1936, the Company bought the Van Krieken heirs' *Padjarakan*, closing down the factory and concession but adding its licensed quota to the Company's total to give greater possibilities for its two remaining factories. Over a few years its five operating factories had become two.⁵⁸⁴
- From 1931 to 1935 all except one of the ten owned or directed by the Colonial Bank successively stopped operating. Half planted in 1936, milling from 1937 on.⁵⁸⁵ This included the consolidation of two neighbouring pairs into single operations, in one case completing a possibility long-postponed on financial calculations.⁵⁸⁶
- Of the twenty three operating NHM-represented factories in the early 1930s, one operated in 1934, nine in 1937 and ten thereafter - including about half of those operated under its own name.

⁵⁸⁴ Optimistically the company did not completely abandon the closed factories, transferring some equipment from them to the operating ones but otherwise maintaining them as 'reserves' in case of better times. None reopened.

⁵⁸⁵ Van der Capellen 1941: 15.

⁵⁸⁶ Earlier discussions in the 1920s about *Gending* taking over its related and smaller neighbour *Maron* had stalled when both were profitable so the *Gending* Directors started accumulating an expansion reserve. However, as the restrictions and predictions of the early 1930s made clear there would not be profitable expansions of the industry for the foreseeable future the reserves were used to buy out *Maron*'s shares in 1933. There was some milling to joint account before the latter's production quota was acquired in 1937 (presumably related to complicated debts with the Colonial Bank) plus those bought from a cane estate and from the Bank's allocation for its previously operating own factories, and *Maron*'s company liquidated (*Gending* 1938: 24-7).

- None of the HVA's then fourteen milled in 1935 or 1936. It planted in 1936 and successively restarted half of them over 1937 to 1939 after 3 to 6 years of closure, two in the East Hook and five in the Kediri complex.
- The Principalities Plantation Company was particularly hard pressed. In 1929 it completely or partly owned thirteen operating factories and two cane estates. Three "own factories" were within its own company structure, the others in eight separate companies. Only one of the fifteen estates planted in 1933 for 1934, none in 1934 and one in 1935, the same exception as in 1933. In an apparently successful attempt to overcome the financial problems, over several years the group of related companies was reorganised into a single, smaller United Principalities Plantation Company. By 1936 four factories were planting, a fifth starting again in 1937. These five included one of the previous three fully owned, four of the eight partly. These continued, with additions of production shares and planting areas from closed factories. Thirteen had become five.⁵⁸⁷
- The NILM came into the 1930s owning eight operating factories and, as usual, with operating profits having turned into losses from 1930. Seven planted in 1931, five in 1932 and two in 1933, in that year on a limited scale. As well as milling these also planted in 1934 - but not in 1935 so none milled in 1936. With the increasing clarity and optimism for the future there was a reorganisation of the company.⁵⁸⁸ The last-milling two were planted again in 1936 and a large proportion of shares in another replanting factory taken up. In 1937 a third from the original eight was planted. Subsequently the planting at its three milling factories were increased, profits increased and its large majority share of the newly

⁵⁸⁷ Increasing operating losses, the calculated stopping of operations thus of short-term future incomes, and pessimism about the longer-term lead to a company reorganisation, foreshadowed in its 1933 Report. After various delays (including waiting for the Government's rationalisation plans, a clearer picture of the future of the world market and arranging the liquidation of five of the related companies) the Director's proposal to fuse all the remaining companies into a single United Principalities Plantation Company (Vereenigde Vorstenlandsche Cultuur-Maatschappij) was brought to the 1937 shareholders' AGM. This was agreed to and the legal transfer of property and rights made at the end of 1938. Shares of the Principalities Plantation Company and the, now only three, related companies were exchanged for shares in the new company on the basis of their final 1936 balances. Most production-shares of all the factory and cane estates were re-allocated between the factories that were to be kept in operation, with some sold to other continuing companies to raise capital.

⁵⁸⁸ From its founding as a daughter-company of the N-I Trading Bank (NIHB) to operate its plantation interests as a response to the 1884 crisis the NILM was entirely owed by the NIHB. In 1935 it was converted into a limited company and, after a reorganisation of financing arrangements with the NIHB (including much writing off), small profits were declared in 1936 and larger ones in 1937.

bought factory raised slightly.⁵⁸⁹ Nine operating factories had become four, with three from its original eight.

- The proportional drop for the non-owning Internatio followed the pattern - the twelve factories with which it had commission and management agreements before 1934 had dropped to five by 1937 with f. 5 million written off.⁵⁹⁰
- The Eschauziers' integrated collection of eight around Modjokerto were all closed at one time or another. Seven milled in 1932, four in 1933, two in 1934, one in 1935 and a different one in 1936. A second was restarted in 1937 and these two milled for the whole Eschauzier local complex thereafter. The pair in Kediri were closed successively after their 1932 and 1933 millings with only one reopened several years later to mill from parts of both. Ten became three.
- Three of the Oei Tiong Ham five last milled in 1933.⁵⁹¹ Apart from a break in 1936 the remaining two then used the company's total production quota.
- The operating four of the ex-Van Hoboken company's De Maas Plantation Company were reduced to two.

As intended, there were similar consequences for the small companies and combinations.

- The three adjacent Cirebon factories of the Aments reduced their plantings then, in 1933, did not plant with all their harvests milled by one, *Gempol* - after which it also stopped. It milled again after four years using the total Ament company quota.
- Similarly the Dezentjé's cluster of three were all closed after the 1932 milling with only one, *Karanganom*, reopened several years later to use the Djoengkaré company's production quota.
- After the three Hoevenaar concern factories had their planting radically cut back they stopped in 1933 and 1934. One milled again in 1937 then a second in 1939, at about two thirds and one third of their previous maxima.⁵⁹²

⁵⁸⁹ The factory was *Sindanglaoet*, the share rose to over three quarters of the total of ordinary and preferential shares (NILM Annual Reports 1936-9).

⁵⁹⁰ Sipos 1992: 52.

⁵⁹¹ However, one of them, *Pakkies*, was 'rehabilitated' at the beginning of the 1950s, nearly two decades later (Kunio 1989: 144).

⁵⁹² *Karang-Soewoeng*, which had taken over the concession of the just closed, small neighbouring *Djatipiring* (previously owned and directed by Kwee Zwan Hong Brothers) in 1931/2, milled a small amount of joint seedling cane in 1937 *Djatibarang* was the first to fully restart, *Adiwerna* never restarted - with *Pangka* (owned by another company with the same Director) growing some cane in its area from 1939.

- Two of the five directed by A W Hartman were restarted, one using part of the planting area of a third, while another two came into the hands of their company's financier, the NHM, and were closed down.
- Both of the Baud heirs' factories were stopped in 1933 with only *Ketegan* restarted in 1937.
- The reduced areas of the Dingers' adjacent *Kenongo/Modjopanggoeng* were milled through one, as were the Birnie's *Pradjekan/Tangarang*, Han Kong Gie's *Porrong/Tjandie*, the Kendal sugar factories' *Gemoe/Tjepiring*, and the Ety's *Wonolongan/Oembel* from their three.
- Exceptionally, both the Javanese Solo dynasty's pair *Tjolomadoe* and *Tasikmadoe*, continued to operate, with a break of one year for only the latter.⁵⁹³
- In contrast, the cluster of three sister-factories directed by R H Erdmann were all closed after the 1932 milling, their companies later liquidated and their production shares sold to their financing company.⁵⁹⁴

⁵⁹³ They had been owned by the Pangeran (Prince) of the Solo Mangkunegara dynasty since 1865 and 1871 respectively, by the end of the 1920s having been passed down from the fourth to the current, tenth, Pangeran Pakubuwono. Part of the Mangkunegara Principality's Property Fund (which also included a fibre and a coffee plantation, a hotel and other buildings in Central Java) they were operated similarly to European-owned ones, under the overall Superintendent of the Enterprises of the Mangkoenaran (De Vries 1928: 207; Verhoeven 1939).

⁵⁹⁴ Which subsequently re-started one adding part-planting from another.

APPENDIX 14 EUROPEAN FACTORY AND FIELD MANAGEMENT STAFF⁵⁹⁵

a. SENIOR ADMINISTRATORS

The *Administrator* was the head of the whole undertaking and responsible for its good running. He had oversight of the planting, the fabrication, the book-keeping, the transporting and the whole internal operating of the business. He represented the factory to the outside world.

The second-in-command position was usually called the *First Employee*. Normally he was in charge of and responsible for all the planting activities, handling in discussion with the Administrator the business of ground-lease, seedling supply, planting, irrigation, fertilizing, working, cutting and transporting of the cane. He would deputise for the Administrator in his absence. Administrators were appointed from First Employees. Latterly there were a few *Under-Administrators* to be found in the staffing of a handful of large estates, to whom a part of the Administrator's work was given over but stayed subordinate and answered to him. There were also field positions called *Chief of Planting*, *Chef Rayon* or *Head Field Supervisor*, but these were normally newer titles for the First Employee and/or a consequence of the establishment of Under-Administrators taking some of a First Employee's more general duties.

b. STAFF IN THE FIELDS

The *Field supervisors* or *Field overseers*, carried out the instructions of the Administrator, directly or through the First Employee. They had a certain measure of initiative, dependent on their own capacity or experience and their supervisor's inclination to directly involve himself in minor matters or to leave these to them. They were involved in supervising ground-leases, land-measuring, irrigation and water-levels, ground-working, fertilizing, disinfection of stalks, extermination of harmful creatures, weeding, trashing, guarding, cutting and transporting of the cane.

However, on very many estates the latter two activities would be managed by separate employees under the direction of the field supervisors: *Cutting Field* and *Transport* or, later, *Railway supervisors*. The Cutting Field Supervisors ruled over the cutting of the cane and its transport with carts, while the Railway Supervisor exercised oversight of the narrow-gauge railway and the changing of the movable tracks. Outside

⁵⁹⁵ Most is taken from the 3 successive editions of Vereeniging 'Oost en West' in 1911, 1917 and 1929.

the milling time these employees serve as Assistant Field Supervisors or were put to the oversight of building or similar work.

Normally a Field Supervisor would be allocated a particular section of the total planting area as his responsibility. Also the care of the seedling fields and transport of the seedlings would often be done by Field Supervisors, although some estates appointed separate personnel, *Seedling-field Supervisors*.

As well as the first level of field employees there were often a second level of *Assistant Field Supervisors*. Among them were found men who had previously already served as Fabrication Chief, Mechanic, Book-keeper or Watchman in the factory and now, under supervision of the Field Supervisors, taken a small piece of the planting under their management or some of the workings in the planting area of these supervisors. Others had been appointed directly without previously working in the factory. However, these were only chosen from men who know the local language and therefore were never just out from Europe.

Also in this category were the so-called *Field Chemists*, usually employees who have already worked as Fabrication Chief or Chemist and, while they gradually learn the field work, were given the task of sampling and testing of the cane to determine the time of ripeness. This testing was not carried out during the whole year so the Field Chemists also served as Assistant Field Supervisors, and were also attached to the seedling fields to carry out the chemical testing of the stalks.

c. STAFF IN THE FACTORY

The *First Mechanic* was responsible for the good working of the milling equipment and machinery for steam production and for their regular operating. He mounted new machines, and erected and maintained buildings, both for the factory and the housing. By early in the twentieth century he was also responsible for the electric light, the steam locomotives and railway wagons, as well as the carts etc. for the cane and sugar transport. As more machinery came into the industry, and electric power, and truck transport, diesel locomotives and some mechanical groundworking was introduced a First Mechanic's duties and responsibilities were widened.

Under the First were the *Second Mechanics* and (*Mechanic-*)*watchkeepers* who, outside the milling time, looked after the cleaning, new mounting and restoring of machinery, helped in building and, during the milling period, in day and night shifts controlled the regular running of the machines and equipment, so the cane was regularly milled and there was enough steam power and light for the milling and fabrication processes.

There were also a variety of lower level employees such as *Third Mechanics*, *Assistant Mechanics* and *Volunteer Mechanics* gaining work experience, as well as, later, mechanics in more specialised roles.

The *Fabrication Chief* was responsible for managing the chemical aspects of the fabrication process, from when the juice came out of the mills; he looked after the juice purification, the steaming, cooking, centrifuging, etc, - all that was necessary to get the maximum amount of sugar of the desired quality. He also monitored the setting up and carrying out of the fabrication-control, controlling the analyses and carrying out the necessary accounting to put together the frequent fabrication-reports.

The sampling, the simple determining and writing down were done by the Native laboratory staff under supervision of the *Chemists*, who by day and night shift would be present doing this work, dividing their time between factory and laboratory. They supervised the work in both places and acted on orders given in relation to the fabrication by the Fabrication Chief. In this they were helped by (*Chemist-*) *watchkeepers*, who carried out their routine roles and immediately intervened or reported when anything happened that deviated from the normal routines.

As with the mechanics hierarchy, in some cases there were also various lower level Second Chemists, Assistant Chemists and Volunteer Chemists, at least the former two likely to have little if any special training.

The *Warehouse Supervisor* received and managed materials required and, in most cases, also supervised the weighing and the sending out of the fabricated sugar.

d. OFFICE AND OTHER STAFF

The *Book-keeper* managed the cash, arranged the paying-outs, kept the books, looked after the supply of the necessary large and small cash and, on many factories, supervised the muster-rolls of the Native factory workers, and checked that the sugar sent out was being properly packed and marked.

A *Secretary-Bookkeeper*, a higher position present at only a minority of factories, carried out the duties of a book-keeper and also handled much of the correspondence into and out of the factory on behalf of the Administrator.

The *Weighbridge Supervisor* weighed the incoming cane and the fertilizers and other bulk materials and kept the accounting of advances with the carters. Also often he instructed Native labour in the maintenance of the factory-emplacement. As factories and their planted areas were expanded weighbridges were also set up in the fields, often at strategic points on the railway lines with cane weighed on its way in rather than only at its entry to the factory itself, so a weighbridge supervisor was increasingly likely to be working in the fields rather than in the factory or office.

Note: In the field, the factory and the office the majority of permanent workers were not these classified as "European employees" but were "Natives", with some "Chinese" in particular areas. Most European supervisory, including the technical work in the factories, was done indirectly through hierarchies of Native foremen (*mandurs*) and artisans (*tukangs*) who directly interacted with the hundreds or thousands of Native workers. The majority of office and weighbridge work was also carried out by Native or Chinese clerks, cashiers, draftsmen and office boys. How the Fabrication Chief and Chemist hierarchy interacted with the specialised Chinese juice-cooking teams is now opaque.

APPENDIX 15 NUMBERS, COUNTRY OF BIRTH AND QUALIFICATIONS OF EUROPEAN STAFF

- In the 1920s it was still possible for some to reminisce about the Cultivation System before this period. One old writer remembered planting and cultivation being organised by Native and European officials with the Administrators having to provide any fertiliser and having only the right to refuse poor fields. He recalled Administrators being owners, their sons or sons-in-law - or sea captains and mates who could get on well with workers. Equipment was set up by monteurs sent out by the machine factories, foreigners as Dutch and Natives did not like to get their hands dirty. There would be only a handful of European employees including a field supervisor and a mechanic or, rather, a machine driver (Bley 1927).
- An 1890 photo of the European employees of an average-sized factory included a personally identified seven; an Administrator, three field employees, factory overseer, mechanic, book-keeper (JCM 1940: 5).
- Another factory newly operating in 1890 also had seven; an Administrator, book-keeper, mechanic, two field supervisors, two watch-keepers (Van Vloten obituary, *Archief* 1924: 126-36).
- The 1898 closure of one relatively small factory involved the transfer of eight; Administrator, book-keeper, first and second mechanics, weighbridge supervisor, factory supervisor, two field supervisors, while a more advanced sister-factory also had a fabrication chief and a chemist (*Verslag der Mij. tot expl. der Kendalsche suikerfabrieken* 1898: 9).
- Thirteen appear in a labelled 1898 photograph at a relatively large factory; Administrator, First Employee, four field supervisors, first mechanic, second mechanic, fabrication chief, second fabrication chief, weighbridge supervisor, book-keeper, work-boss overseer (*Gedenkboek ... Gending* 1938: I).
- In 1905, as a relatively small factory moved into its expansionary phase, it had eleven permanent European employees; Administrator, book-keeper; two field supervisors, first mechanic, two second mechanics, fabrication chief, chemist, weighbridge supervisor, warehouse supervisor (*Gedenkboek ... Tandjong Tirta* 1930: 43).
- In 1923 the major JSWB survey found an average of nineteen to twenty; 3-4 chemical, 4 technical, 5-6 field, 3-4 administrative, and 3-4 transport and weighbridge personnel (Tichelaar 1924-5: Inleiding 1201).
- In 1929 an informed suggestion was that a 'large factory' of around 2000 hectares of planting would have about forty nine, while a 'small factory' of around 550 hectares would have about fourteen (Vereeniging 'Oost en West' 1929: 26).

- In 1929 one of large average size had thirty three; 'Administration' - Administrator, a secretary-book-keeper and 2 assistant book-keepers, a store master and 2 assistants, and an office employee; 'Planting' - a First Employee, 4 field overseers and 2 assistants, with a volunteer and a field chemist; 'Railway etc' - a railway overseer, two assistants and a mechanic; 'Fabrication' - a first mechanic and 3 assistant mechanics, a fabrication chief and 2 chemists, plus a weighbridge and a warehouse overseer and 3 daily-paid (Jong 1930: 43).
- Through the 1920s the ten factories of the Colonial Bank, which ranged from small to very large for the time, had an average of about twenty two increasing to twenty seven. (See the table at the back of the 1940/48 report of the Bank's pension scheme).
- In his 1946 book on the Java sugar industry, published in German, the ex-Administrator J. Van der Linden described the staff of "an average-sized factory". These included a little over thirty Europeans: 17 European field positions, with 118 Javanese in various supervisory positions and a further 300 as group leaders of 5000 coolies; about 10 European technical employees, with 28 Javanese locomotive employees and 160 tradesmen and coolies for day and night shifts; only a few Europeans employed in fabrication as chemists or to supervise laboratory, equipment and procedures, with 30 Chinese carbonators, evaporators and sugar cookers and 300 Javanese coolies in shifts: 3 European book-keeping personnel as book-keeper, assistant book-keeper and typist, with a Chinese and a Javanese cashier, a Javanese clerk for field activities and a Javanese assistant-clerk. (Van der Linden 1946: 21-2).
- During the planting restrictions of the 1930s numbers were reduced, obviously to a skeleton staff when a factory was only on care and maintenance and not planting or milling.

The only full, or nearly full, survey of the backgrounds of European staff in the factories and fields was the official one carried out by the JSWB of those who were working in its 160 member factories on January 1, 1923. This survey, with its industrial-political potential, was carried out as there was no comparable information available. Its analyses were published (Tichelaar 1924-5). These were still the only ones referred to in JSWB-sponsored publications for the rest of the 1920s (eg. Tichelaar 1925b; Van der Mandere 1928, Oost en West 1929) while cutbacks in the 1930s meant no such activity was repeated.

This survey produced a total of 3164 employees, not including the Administrators of each of the 160 factories. This 3164 was used as the basis for

claiming that there would be about 3640 in the entire 182-factory industry if the relatively few, and usually smaller, non-JSWB-members were included. The survey divided the 3164 into the five main categories of: "Administrative personnel" - 495; "Technical personnel" - 624; "Chemical personnel" - 564; "Field personnel" - 888; "Transport and weighbridge personnel" - 564; plus a small residual category of 29.

These European employees were also categorised and reported as "Indies-born", "foreign-born" and "Dutch-born", by if and where they had gained certificates, by previous occupations, and by how long they had been in previous and present occupational ranks.

A. ADMINISTRATIVE PERSONNEL 1923

This category comprised the Secretary-Bookkeepers, Book-keepers, Assistant Bookkeepers, Storemasters, and Warehouse Supervisors. Only a couple of dozen of the larger factories had a Secretary-Bookkeeper, but all would have had either one of these or a Bookkeeper. Not all had an Assistant Bookkeeper while some of the largest would have had more than one. Only about half had a Storemaster and a third a Warehouse Supervisor - which indicates that these necessary functions were frequently carried out by Native employees, probably under the supervision of the Book-keeper or similar.

The percentages of Indies-born among those employed at the beginning of 1923 as Secretary-bookkeepers, Bookkeepers, Assistant Bookkeepers, Storemasters, and Warehouse Supervisors were 33, 51, 63, 83, 78⁵⁹⁶.

- Among the 6/9 Indies-born *Secretary-Bookkeepers* with diplomas only 33% had gained these in the Indies, while 93% of the 15/17 Dutch-born with a diploma had gained theirs in the Netherlands.
- Only 17% of the Indies-born *Bookkeepers* held a diploma (68% of these from the Indies), while 45% of the 62 Dutch-born had at least one (93% from the Netherlands).
- 22% of the 109 Indies-born *Assistant Bookkeepers* held a diploma (63% Indies) compared to 52% of the Dutch-born (all Dutch).
- A small 7% of the Indies-born and 6% of the Dutch-born *Storemasters* had any diploma.
- Among the 55 *Warehouse Supervisors*, 12 had gained only the elementary school certificate (*klein ambtenaarsexamen*) and 3 more had completed a couple of years at a trade school (2 of which, both Indies-born, had a diploma from such a school).

⁵⁹⁶ Among the remaining 12/55 nearly as many were German-born (5) and Dutch-born (7).

B. TECHNICAL PERSONNEL 1923

This category comprised the First Mechanics (159, one for each factory), Second Mechanics (349, on average two in each factory), Third Mechanics (50, thus the great majority of factories had no one employed under this title), and a residual category (66) of occupations any one of which were labelled as such at only a small minority or a couple of factories.⁵⁹⁷ It was remarked that only a quarter of the First and Second Mechanics had ever started as a Third but almost all the First Mechanics previously had been a Second (thus the lowest category was not an integral stage of the normal promotion system).

The percentages of Indies-born among the First, Second and Third Mechanics were 53, 61, 88⁵⁹⁸.

- 81% of the 84 Indies-born First Mechanics had a diploma (two-thirds were from the Indies), while 87% of the 71 Dutch-born had one (almost all from the Netherlands).
- 74% of the 214 Indies-born Second Mechanics had a diploma (including 23% with 2 or more), of which 72% were from the Indies, while 89% of the Dutch-born had one (including 50% with at least 2), apparently all from the Netherlands.
- Among all the 50 Third Mechanics only 28% had a diploma, among the 44 Indies-born only 23% (9/10 from the Indies).

The Indies diplomas had been gained from a small range of trade and technical schools: the City Night School (*Burgeravondschoot*) in Surabaya; the Queen Wilhelmina School in Batavia; and the Semarang Trades School being the most prominent. The next most frequently possessed were one or more levels of merchant marine mechanics certificates. Among the First Mechanics a few had diplomas from one of the 3 private Sugar Schools in Surabaya.

The majority of Dutch diplomas were from the Amsterdam Secondary Technical School, about half as many were those from an unspecified "Trade School", some from a City Evening School, then a few from the Delft Higher Technical School, a "Technical School", the Secondary Technical School at Dordrecht or the School for the Sugar Industry in Amsterdam or, even fewer, from other institutions. However, after those from the Amsterdam Secondary Technical School, the second most frequent category of diplomas, particularly among the more senior and older First

⁵⁹⁷ This included the overlapping 19 'remise machinists' (who worked in the railway sheds) and 3 'locomotive machinists', 14 'watchmen', 9 electricians, 3 pump machinists and 1 each tractor machinist, monteur group boss, mechanical ground-working machinist, 'outside work' machinist, and 'chief of the technical outside service'.

⁵⁹⁸ Of the 6/50 non-Indies-born, 4 had been born in Germany and only 2 in the Netherlands.

Mechanics, were one or combinations of levels of merchant marine mechanic certificates.

This is clearly related to the report that, before coming into the sugar industry about a half of the Second and over a third of the First Mechanics had worked somewhere else, in machine factories, in railways, mines, technical bureaus, in oil - but a large minority in the merchant or naval marine. This tendency was more marked among those born outside the Indies, among the Dutch and, even more, among the "foreigners", almost of all of whom had started their careers with ships⁵⁹⁹

C. CHEMICAL PERSONNEL 1923

This category comprised: Field Chemists or Test-field Employees (67, found only on the larger estates), Fabrication Chiefs (159, one for each factory), and Chemists (338, no distinction being made between 'first' and 'second', about two for each factory). By far the largest proportion of the Field Chemists had previously been a Chemist or Fabrication-chief.

The respective percentages Indies-born among them were 58, 49, 41.

- 97% of the Indies-born Field Chemists had at least one diploma (42% from the Indies, 67% from the Netherlands), as did all the Dutch-born (89% Netherlands, 24% Indies).⁶⁰⁰
- 95% of the Indies-born Fabrication Chiefs had a diploma (64% Indies, 49% Netherlands), as did 93% of the Dutch-born (90% Netherlands, 24% Indies). About a third of the former had more than one diploma, while slightly over a quarter of the latter did.
- 82% of the Indies-born Chemists had diplomas (52% Indies, 49% Netherlands), as did 92% of the Dutch-born (almost all Netherlands). A quarter of the former and 29% of the latter had more than one.

The Indies diplomas had been gained mainly from the Sugar Schools of the Sugar Union and of Dr. Von Haber (either or both the A and B courses), at the Syndicate Exam, from the Plantation School at Sukabumi or the City Evening School in Surabaya, with a handful from trade schools in Batavia and Surabaya and agricultural schools in Buitenzorg and Malang. The most common combinations were from one of the Sugar Schools preparing students for the Syndicate Exam or from another school plus the diploma from that Exam. It was noticeable that only 6% of the

⁵⁹⁹ It was pointed out that 47/113 of the Dutch had been born in either of the port cities Amsterdam or Rotterdam.

⁶⁰⁰ The total figures for country of diploma are above 100% due to reports of holding diplomas from both countries.

Chemists but 24% of the Fabrication Chiefs had gained the Syndicate Exam's diploma (with this 24% comprising 32% of the Indies-born and 16% of the Dutch-born Chiefs).

The great majority of the Dutch diplomas were from the Amsterdam School for the Sugar Industry, with minorities from the Amsterdam Secondary Technical School and the Deventer Colonial Agricultural School (plus nearly as many who had added the Colonial Sugar Course qualification from the latter School). About a tenth had been to the Wageningen Higher Agricultural School, and a few to the Dordrecht Secondary Technical School, with only occasional references to the Rotterdam and Den Haag equivalents, and a handful to the private sugar course in Amsterdam.

It was pointed out that most of those with a Dutch qualification had thereby practical experience for one or more campaigns in a beet-sugar factory and a minority had worked in a factory making machinery for the sugar industry (mainly in either the Stork or Werkspoor factories). The Indies diplomas also required practical experience during campaigns. Most of the chemical personnel had entered the sugar industry as a Chemist, although a few, mainly with mechanic training, had started as a mechanic. About a fifth had previously worked elsewhere, in a wide range of occupations, but with the largest single category (but still only a few percent) in a hill-plantation.

On some estates the work of Field Chemists was done by factory chemists while the Test-field chemists worked only in the test-fields, in others employees called 'Field Chemists' worked in both the milling and test fields. Overall the work of the Field Chemists and Test-field Chemists overlapped and designations varied between different estates so much that the report did not differentiate between them. The only obvious differences in qualifications is that a larger minority of them had a diploma from the Wageningen Higher Agricultural School (16%, with 8/11 also taking the Sugar Laboratory course) compared to the Fabrication Chiefs (9%) and Chemists (4%).

D. FIELD PERSONNEL 1923

These were the: Under-Administrators (12, at only the largest estates),⁶⁰¹ First Employee (64); Chief of Planting (25); Chief Field supervisor/Chief Rayon (41); Field Supervisors (632); Seedling-field Supervisors (24, a separately designated occupation at only the larger estates which ran their own separate seedling fields, normally in the hills some distance away from the lower land milling fields); Assistant Field Supervisor (87, only designated as such at a minority of estates).

(Due to the overlap of activities and responsibilities of the first four designations, which were largely a matter of size, specialisation and changes in

⁶⁰¹ Of the 12, 5 were at the exceptional *Djatiroto* with one at each of 7 others.

nomenclature in some estates at the "top end" of internal management they will be combined into one, which will be called "First Employee".)

The percentages of Indies-born among the First Employees, Field Supervisors, Assistant Field Supervisors, and Seedling-field Supervisors were: 57, 74, 88⁶⁰², 83⁶⁰³.

- Among the Indies-born First Employees 59% had one or more diplomas (65% of which awarded in the Indies, 46% Netherlands), as did 70% of the Dutch-born (90% Netherlands, 17% Indies).
- 35% of the Indies-born Field Supervisors had diplomas (59% Indies, 48% Netherlands), only half as many as the 71% of the Dutch-born (86% Netherlands, 20% Indies).
- Only 25% of the Indies-born Assistant Field Supervisors had diplomas (83% Indies, 22% Netherlands), also low compared to the 54% of the Dutch (all Netherlands).
- Only 25% of all of the Seedling-field Supervisors had any diplomas, including 20% of the Indies-born.⁶⁰⁴

A minority of the First Employees had worked elsewhere before sugar, as had about a third of the Field Supervisors, about two thirds of the Assistant Field Supervisors, and about half of the Seedling-field Supervisors. The most frequent previous area had been in other plantations but there was a wide variety of previous occupations.

The majority of First Employees had started in sugar as a chemist, with far fewer as a mechanic, then a scattering of other, mostly low level, initial positions. A little over a third of the Field Supervisors had started as one or other of the chemical personnel, only a few as technical personnel, and about a third had started in one of the variety of lower European positions (including nearly a sixth as a Weighbridge Supervisor). Only a few had started in sugar in that position, with most of these few having previously been working in another culture.

Nearly a third of the Seedling-field Supervisors had started as a Field Supervisor or Assistant Field Supervisor, a couple had been Cutting-field Supervisors and the rest scattered among the various low level positions. About a quarter of the Assistant Field Supervisor had started as such in sugar with about as many having started in some other field role, with similar numbers having been a Weighbridge or Warehouse Supervisor.

⁶⁰² 71/87 Indies-born, 13 Dutch (including 2 in the Dutch West Indies), 3 "foreign" European.

⁶⁰³ 20/24 were Indies-born, 3 Dutch and 1 German.

⁶⁰⁴ The 5 diplomas among these 4 employees were one from each of the "Wageningen Agricultural School", the "Soerabaja Sugar School", the Buitenzorg Agricultural School, and a combination of one from "Dr Von Faber's Sugar School" and the Syndicate's diploma it prepared for.

E. TRANSPORT AND WEIGHBRIDGE PERSONNEL 1923

This category included the Head and Assistant Railway Supervisors, Railway Supervisors, Transport Supervisors, Chiefs of Transport, Head and Assistant Cutting Field Supervisors, Cutting Field Supervisors, and Weighbridge Supervisors.

Interestingly, apart from reporting the total of 564 in this category no further analyses were mentioned in the original series of articles, and no more were reported in any of the successive publications which utilised Tichelaar's findings.

APPENDIX 16 STAFF WAGES AND OTHER PROVISIONS

A. WAGES

The informed 1911 report of the "East and West Society" claimed that First Employees or Under-Administrators were paid f.400 to f.500, first level Field supervisors f.250 to f.350, second level Field supervisors and Field chemists f.150 to f.200.⁶⁰⁵ Seedling-field Supervisors, who worked in the hills as the only local management, received more than their field supervisor colleagues working on the plains. First Mechanics received f.300 to f.500 with bonuses if extraordinary tasks such as large building works, important expansions or replacing of machinery were required. Second Mechanics' salaries ranged between f.150 and f.200. A Fabrication Chief's wage was f.250 to f.350, Chemists' f.150 to f.250. Book-keepers got between f.200 to f.300. A variety of factory Watchkeepers, Weighbridge, Warehouse, Cutting-field and Railway Supervisors were being paid f.100 to f.150, with some others getting less than this.

The corresponding 1917 publication reported similar ranges, adding a Planting Chief category at f.350 to f.400, and increasing the maximum for the various second level field employees by a large f.100 to f.300. The rates for Seedling-field Supervisors had now dropped to below the plains-workers. The Second Mechanics' maximum had increased by f.75 to f.275, the Fabrication Chief's by f.100 to f.400, the Book-keepers' also by f.100 to f.400, while an Assistant Book-keeper's range of f.150 to f.250 was mentioned for the first time. Wages for the lowest categories now reached up to f.225, a f.75 increase from those reported 6 years previously.

In 1917 the monthly wages for management staff at the quite new but small and failing NHM-managed *Kebon Hardjo* included an Administrator 800 (since 1914, previously First Employee); Bookkeeper 300; First Employee 350; Assistant Field Supervisor (apparently Native) 200; First Mechanic 400; First Chemist (Fabrication Chief) 300; Weighbridge Supervisor 125 (with a new Second Mechanic just been taken on after working on a merchant ship).

By 1920 the current scales of the various major owning or managing companies were similar so it was not a large shift to the JSWB-Union agreement for a standardised scale.

⁶⁰⁵ Vereeniging "Oost en West"1911.

The new JSWB-Sugar Union Salary Scheme 1920 (Monthly rates)⁶⁰⁶

	Minimum	Maximum
Secretary Book-keeper	500	600
Book-keeper	350	500
Assistant Book-keeper	250	400
Field Supervisor	450	600
Assistant Field Supervisor	250	400
First Mechanic	500	700
Second Mechanic	250	450
Third Mechanic	200	300
Fabrication Chief (1st Chemist)	450	600
First Assistant Chemist	250	400
Second Assistant Chemist	200	300
Field chemist/Test-field Empl.	400	500
Transport/Railway Supervisor	250	400
Engine-shed Mechanic	250	300
Head Cutting-field Supervisor	350	400
Cutting-field Supervisor	250	350
Storemaster/Factory Supervisor	250	400
Warehouse/Fertilizer Superv.	200	300
Weighbridge Supervisor	200	300

* Progress from minima to maxima was by annual f.25 steps (unless a company decided faster or larger steps). Service in the same function with another company would be calculated at half value.

* Positions held as "temporary", "acting" or "aspirant" or similar would be paid at 2/3 the permanent rate (but with a minimum of f. 200).

The new standardised salary scales were a large increase from the 1917 rates. Subsequent personnel lists show adherence to this system of ranges and increments. Younger men normally thus earned less than older in the same classification.

⁶⁰⁶ See "De resultaten van de salarisactie", *De Suikerbond* 1920: 826-30.

There were minor increases during the 1920s, then an industry-wide 10% cut in 1931. Also, with the cut-backs in operations and staffing many staff were downgraded in position and thus salary. The whole JSWB scheme was suspended in 1934 leaving each company free to set its own rates. After the stabilisation from about 1937 a new scheme was re-established with only minima prescribed. Rates set after this, for example at the NHM's own factories, at *Doekoewringin*, at *Tjomal*, were above these minima. Given the reductions in cost of living during the Depression the local purchasing value of even the reduced wages was at least maintained. The greater loss had been in the value of profit-shares.

Administrators, and often also First Employees or Under-Administrators, had individually arranged contracts. In 1911 Administrators' salaries were claimed to vary between f.600 and f.1000 a month, the lower being the more general with the higher f.750-f.1000 for Administrators in the large factories. By the 1920s Administrator's basic salaries were from about f.800 to f.1000 a month, with some rising annually to f.1,250.⁶⁰⁷ Their salaries had not been increased as had those of their subordinate management staff whose averages had been lifted from about a fifth to nearly four fifths for different occupations from 1917 to 1929.⁶⁰⁸

It is perhaps significant to changing assumptions about management that at least by the end of the period on the JSWB forms for returns of information about "European personnel" from individual factories there are printed instructions that "Among European personnel is understood all employees - in spite of the nationality - who carry out a function named in the salary-regulation of the JSWB. If European employees are working on an estate in functions which are not named in the salary scheme, then these must be included as well. Finally mention daily paid and/or European employees working in functions which are filled by non-Europeans as well as Europeans." This might indicate there were some breaks being expected in what had been a hard and fast race-division of occupation although this was not apparent in the personnel lists consulted.

⁶⁰⁷ See Vereeniging "Oost en West"1911; Vereeniging "Oost en West"1929; Personnel files from *Tjomal* and *Kadipaten*.

⁶⁰⁸ A First Employees' f.600-750 was about half as much again as in the previous edition 12 years before, while the Field supervisors' 400-550 was nearly 60% higher, the First machinists' 450-650 was 30% and the Second machinists' 250-450 nearly two thirds higher. Fabrication Chiefs were nearly 40% higher at 400-550, Chemists 60% at 250-400. Book-keepers' maxima, at f.550 were nearly 40% higher, while Assistant book-keepers' were up 60% at 400. The range of lower categories now reached f.275 for Weighbridge and Warehouse supervisors (over 20% up), 350 for Cutting-field supervisors (up 55%), and 400 for Railway and Transport supervisors (up nearly 80%). (These changes were calculated from Vereeniging "Oost en West" 1917 and Vereeniging "Oost en West"1929.)

B. PROFIT SHARES FOR FACTORY AND FIELD STAFF

By 1920 there appeared to be only small variations between the major owning and managing companies in the profit shares paid.⁶⁰⁹ The obvious difference was that some were paying only profit shares and others a mixture of profit shares and gratuities, the latter to the lower employees. Some rates increased after years of service within a particular occupation but the relativities between ranges were maintained.

From the early 1920s staff profit shares, as with salaries, were largely standardised on JSWB-rates for all management employees apart from the Administrator. One list (at the Colonial Bank-managed *Gending* 1932) included: First Employee 1 1/4; Book-keeper 1/2; Asst Book-keeper 1/8; Field Supervisor 3/4; First Mechanic 1; Second Mechanic 1/4; Fabrication Chief 3/4; Chemist 3/16; Weighbridge, Cutting-field and Warehouse Supervisors 1/8. Those for factories with the same managing company, such as at *Kanigoro* in 1928, 1929 and in the 1930s, appear identical, and at least similar for those with others, such as the NHM-managed *Doekoewringin* in the 1930s. There had been little change in these figures during the 1920s and they would have been typical, in scale and relativities, with some small variations according to length of service.

The Colonial Bank-managed *Gending* and *Kanigoro* Administrators' shares were then 6% - and would have been set separately as part of their contract. That 6% appears relatively low. In 1911 it was reported that an Administrator would be likely to be receiving an 8 to 10% profit share, in 1917 from 5 to 10%.⁶¹⁰ *Kadipaten's* Administrators during the 1920s were paid 7 to 8%, rising annually to 10%, with a guaranteed minimum of f.30,000 a year; *Tjomal's* in 1920 8%, with a guaranteed minimum of f.50,000 for the next four years - as set out in their appointment contracts. For the 1926 harvest year the profit-shares for the *Tjomal* Administrator and Under-Administrator were f.60,000 and f.10,500 - the Administrator thereby getting nearly as much as the total for everyone else in the factory minus the Under-Administrator. The others shares ranged from one of nearly f.6000, one nearly f.5000, several of nearly f.4000, several around f.1000, to the lowest at over f.500.⁶¹¹

A simple calculation across several such lists indicates that an Administrator's profit share would be in the order of two thirds to as much as that of all the other employees put together.

⁶⁰⁹ According to the incomplete information given about profit shares in the otherwise complete tabulation of wages for European employees exchanged in the debate on standardisation.

⁶¹⁰ See Vereeniging 'Oost en West' 1911: 9 and 1917: 14.

⁶¹¹ ARA 2.20.39 *Tjomal*. Inv Nr 132. 'Overzicht uitbetalingen procenten, Oogstjaar 1926', and 'Overzicht procenten Administrateur, Onder-Administrateur en Gedelegeerde, Oogstjaar 1926' (dated 24/7/1927 and 25/7/1927 respectively).

For example, in the financial years 1923 and 1926/7 the Klaten Plantation Company paid relatively similar amounts to the Administrators at its three factories as to the rest of the European management employees and a fraction of this to the many times more numerous permanent Native employees. The 1923 payments were, in thousands of guilders: to the Administrators - 80, 48, and 58; other European employees - 91, 40, 57; permanent Native employees - 16, 7, 12. In 1926/7 they were: Administrators - 84, 42, 75; European employees - 92, 40, 47; permanent Native employees - 13, 7, 12.⁶¹²

In the 1930s when several factories managed by a company were closed a system of paying profit shares from a pooled system was used, as long as any factories were making any money.

⁶¹² Ver. Klattensche Cultuur Maatschappij annual reports 1923, 1926/7.

C. OTHER PROVISIONS FOR FACTORY AND FIELD STAFF

By the time European staff were employed with written contracts, in about the teens, their extra-wage provisions were listed. After the standardisation with the JSWB-Union agreements from 1920 these provisions would be largely common, though not necessarily of the same quality. They would be provided with free housing, free medical treatment for self and family, normally from the hospital and doctor associated with the factory or company, and with reimbursement of fees for further approved treatment. When available, there might be a charge for electricity used.

Administrators, as well as much grander houses, might be provided with staff such as garden labourers (*erfkoelies*) to help look after it. The variety of other servants for all staff had to be paid for.⁶¹³ A car for the Administrator's, and later perhaps an Under-Administrator's, work purposes could be part of contracts. Previous to that various horse and other transport allowances would be provided, as they were for field staff who used horses for their work.

Annual leave of two to four weeks and overseas leave, with paid fares, for six months after five or six years was standard. These fares, for employee and a legal wife and under-aged children, as for those if sent out from Europe for initial employment, were legally a loan which was successively cancelled by several years of subsequent service. Most staff were provided with second or third class travel, Administrators with first class. Normal leave had to be taken during the "quiet time" between campaigns. This was also when some staff were seconded to work for and train at the Research Station or given leave to attend Sugar School courses, in an unknown number of cases with a subsidy or fees paid.⁶¹⁴

An Administrator would have the same leave provisions but could suffer a, less than proportional, drop in his salary and profit share which would be paid to his acting replacement, most likely the First Employee, instead.

As well as housing, a club house - the "Society" or, less glamorously, "soos" - serving drinks, food and possibly a shop for everyday items, various sporting facilities, tennis, soccer, eventually occasional swimming pools, were gradually provided in or

⁶¹³ In 1917 for a single young man this was suggested as a house-boy and a cook at about f.10 a month each and a gardener at f.6-7.50 - thus a total servant cost of about f.27.50, plus about f.3 each a month for their food. Alternatively, a young man might be able to be boarded by another European employee's family in the housing park, paying f.45-50 without breakfast or another f.10 with (if so he would not have to pay for food for any servants of his own). If he were married only one servant would probably be necessary, a maid (*baboe*) to do the washing, look after the bedroom and otherwise help around the house. (Vereeniging 'Oost en West' 1917: 26-7).

⁶¹⁴ Vereeniging 'Oost en West' 1911: 10-11; 1917: 15-16; 1929: 32.

next to the Europeans' housing area.⁶¹⁵ Hospital and lesser medical facilities, schools or transport to nearby schools for European children became common by the 1920s. At least one company provided a subsidised hills guesthouse.⁶¹⁶

D. PENSIONS

Various companies were paying individual's pensions, apparently directly from their own funds, by the first decade of the twentieth century. The HVA pension scheme for European employees was set up in 1913 then extended to their widows and orphans from the beginning of 1915. The Colonial Bank set up a scheme with annually invested funds for their own and with all related factories in 1916, but not similarly extended to widows until 1937.⁶¹⁷ The Syndicate's Joint Pension Scheme followed, as part of the new standardisation and improvement of conditions in 1920.⁶¹⁸ It was employer-funded by each company contributing 15% of the wage paid to each employee to a cooperating group of four insurance companies of which one, based in Batavia, acted as the link between Java and the Netherlands-based others.⁶¹⁹ Comparable pension schemes for European employees in other plantation industries were not arranged until the mid-1920s.⁶²⁰ Proposals to add pensions for widows and orphans to the industry Joint Pension Scheme were raised at 1926 Sugar Union conference but not then accepted by employers.

The combination of the remaining individual company schemes and the Joint Pension Scheme provided for almost all permanent European staff to receive a pension from age 50, rather than the 55 for Netherlands-based employees. The amounts were based on years of service. The Colonial Bank's was one of the most generous, paying

⁶¹⁵ The fullest description of these are provided in the Administrator's annual report on the various clubs at *Tjomal* (in the ARA 2.20.39 *Tjomal*. Inv Nr 133). The title of this report gradually lengthened until by 1939 it included the Society, Tennis Club, Reading Group, Football Club, Swimming Pool, Association for Harmonious Bodily Development, School Funds and a Native Society (the last surviving of three).

⁶¹⁶ From 1916 the Directors of the 'Eschauzier-factories' provided a small rest-house (*pasangrahan*) for their European employees, which had been previously owned by their Delegate in the Indies and bought from him when he repatriated. In 1930 a much larger guesthouse was officially opened, newly built on the old site in the hills. It included seven plain furnished suites where employees and their families could stay, paying f.3 a day for each adult and f.2 for each child if meals were provided and only for electricity if the guests provided or arranged their own meals. There was a separate dining hall and a swimming pool ('De *pasangrahan der Eschauzier-fabrieken te Patjet*' *Archief* 1930: 1129-1131).

⁶¹⁷ See ARA 2.20.05 Koloniale Bank Inv Nrs 245, 282-92 and Verslag 1940/48

⁶¹⁸ This replaced some but not all of the previous small individual company schemes (eg Pensions 1938).

⁶¹⁹ See 'Stichting "Het Pensionenfonds voor Geëmployeerden, in dienst van Nederlandsch-Indische Suikerondernemingen" ' *Archief* 1920: 1590-1619, and Jochems 1923.

⁶²⁰ *Archief* 1926: 504.

2% of the final salary for each year of service - most pensioners being paid between about f.100 and f.250 a month. From 1937 widows, if European or legally accepted as European at time of marriage, were paid 1/3 and under-aged orphans less.⁶²¹

In addition, from 1896 the Syndicate had administered a small Assistance Funds scheme set up for providing short-term financial assistance to European employees who were sick or discharged, or for orphans and widows. This was funded by wage-based contributions from its employee members and administered by a Syndicate committee of Administrator and employee representatives.⁶²² From early in the century there was also a small Syndicate fund, the Bouricius Funds, to provide aid to families of employees who had died or were incapacitated. The setting up of the various Accident and Pension funds largely replaced these.⁶²³ There were also both semi-routine and exceptional supplementary grants made by Directors, on advice from Administrators, to aid ex-personnel considered to be in worthy need.

In contrast there were never any pension rights for Native employees although several companies did set aside reserves to pay at the Director's discretion. The Colonial Bank and its associated companies paid pensions to Native permanent employees on its plantations from 1922, *Tjomal* from 1923, while the JSWB specified guidelines for all its members in 1927 and started collecting statistics. By 1931 about 3000 were being paid. The standard proposed was a third of the final wage after thirty years service from the age of twenty, rising to a half after forty years, with the 1927-32 figures indicating a peak at thirty to thirty two years. Others were a little more generous, a clear case being the Colonial Bank. Most of those who had stayed employed long enough to be granted a pension were artisans, head artisans, foremen or head foremen when they retired. About four in five pensions being paid were between f.5 and f.20, almost all the rest from f.20 to f.50 - with an average of f.15.43.⁶²⁴ It would have been a remarkable change in the local situation when, mainly in the 1920s, pensions started to be paid to these senior men who had spent several decades working for the local factory. The earliest pensioners would have been involved in its activities since, or even before, the 1890s.

F. PAYMENT OF EUROPEAN MANAGEMENT ABOVE THE FACTORIES

⁶²¹ For details of the Colonial Bank system and individuals see ARA 2.20.05 Colonial Bank Inv Nrs 245, 284-292. For the Joint Pension Scheme see ARA 2.20.33.04, and for the scheme for the employees of the central sugar organisations ARA 2.20.33.05.

⁶²² The number of members assisted, for which categorised reason, and with how much money per category, was reported each month in the *Archief*.

⁶²³ See "Statuten van de Vereeniging "Ongevallenfonds voor het Personeel in dienst van Nederlandsche-Indische Suikerondernemingen" *Archief* 1920: 39-45.

⁶²⁴ Levert 1934: 259-60, 336.

The companies managing and owning the factories included specialised Advisers, more general Superintendents, appointed Delegates or Representatives of Netherlands-seated owning companies, and Directors of the owning companies. The collective management's Syndicate and BENISO had salaried staff. All were paid.

- Advisers to the factories associated with a managing company would be paid both a fixed wage and a profit share from the owning companies of the factories they advised. For example, in 1921 the newly appointed Chemical Adviser to the eleven Colonial Bank factories was to be paid f.900/month plus 1/2% of the nett-profits from each factory with a minimum of f.6,000 and a maximum of 50,000 - which was the same as that for the incoming Technical Adviser in 1925, and the Agricultural Adviser in 1926.⁶²⁵
- Similarly the Superintendent of the managing of all the sugar factories managed by a company would be paid by all the companies owning these factories both a fixed salary and a profit share. The incoming Superintendent of the Colonial Bank factories in 1925 was to receive f.2000/month plus a 2 1/2% share of the nett-profits of all eleven factories with this being no less than the largest amount going to any of the factories' Administrators with a minimum of f.25,000. His replacement in 1929 had the same conditions apart from a reduced f.1500/month and no maximum.
- *Peterongan*'s company expected to be paying Kooy & Co an average of f.20,000 a year from 1929 on to provide management and supervisory services in Java. Previous requests had been declined as Kooy then did not have staff available.⁶²⁶
- In 1917 the Delegate of the owning companies of *Kanigoro* and of *Gending* was granted an increased honorarium of f.3000 and 2400 respectively by the companies' Boards.⁶²⁷ In 1926 the Delegate in Java of *Tjomal*'s owning company received f.9000⁶²⁸ as his ordained share of the profits.⁶²⁹
- Directors also received profit shares. For example, a Director was appointed to the *Tjomal* company in 1919, initially temporarily but by 1925 he was getting an annual honorarium of f.3600 plus a 2% profit share to be between f.6000 and

⁶²⁵ The only difference between this and that for the retiring Adviser was the lack of any maximum amount set on the latter's 1/2% profit share.

⁶²⁶ ARA 2.20.01 NHM [Peterongan archive] Inv Nr 12081 Minutes of Board meetings: meeting 27/6/1928.

⁶²⁷ In both cases the Boards accepted the corresponding proposals from their Directors, who were also Directors of the Colonial Bank. The Delegate for both was the Colonial Bank's Head Agent in Java (See the minutes of the 1917 meetings of the two Boards.)

⁶²⁸ Actually f.15,000, which was the maximum specified from a 2% share, but reduced by the f.6000 prescribed to be deducted for administration. The Delegate was the Head Agent of Internatio in Java.

⁶²⁹ ARA 2.20.08 Tjomal. Inv Nr 132. 'Overzicht procenten Administrateur, Onder-Administrateur en Gedelegeerde, Oogstjaar 1926' (dated 25/7/1927).

15,000⁶³⁰. Another *Tjomal* Director was appointed in 1926 at f.250/month plus a 3% share of profit with a guaranteed minimum of f.12,000⁶³¹

When *Somobito* was put into a family company in 1925 its founding statutes specified that "the director must be by preference an ex-administrator of the Java sugar industry", and would receive annually at least f.4000 and a 3% profit share, with 1.5% to Board Members. In 1939 the 'direction costs' of *Somobito* included f. 9,600 as a 'management honorarium' and 3,300 for 'Director-Personeel'. In 1940 the Director received 7 1/2%, about f.6,500 (the shareholders about 118,500).⁶³² In 1930 the *Kanigoro* Directors received 5%, with similar amounts being shared among the other Board members - this being on top of a directors' fee, such as f.4000/year in 1920 (the same as the 'honorarium' for the company's Delegate in the Indies).^{633,634}

Also in 1930 the modified statutes of the company owning *Gending* specified the Directors would receive an annual salary fixed by the Board and 6% of the profits, with another 6% shared among the Board Members.⁶³⁵

For several other examples of Director's fees and profit shares see the "Profits and Dividends" section below.

- The first Chairman of BENISO, Ramaer, was paid f.6000 a year. However this was only a part-time occupation for him. (He also practised as a lawyer, was Chair of the Quinine Bureau cartel and on several company Boards, including that of the Principalities Plantation Co, Internatio and the Tjeweng and Lestari sugar factory pair.) His successor, Van Hasselt (previously the Secretary), started in 1921 as a full-time Chairman on f. 40,000. This salary was continued with the next Chairman, Jongejan, in 1930 but was cut back to f.25,000 in the depressed 30s and his replacement in 1937, Luyten, was paid only f.20,000⁶³⁶ Talma (previously Indies

⁶³⁰ ARA 2.20.39 *Tjomal*. Inv Nr 128. Item 4.

⁶³¹ ARA 2.20.39 *Tjomal*. Inv Nr 128. Item 16.

⁶³² IISG Cramer Collection. Inv Nr 66. Enclosure: Mededeelingen Betreffende het Jaar 1939 Suikerfabriek 'Somobito'; Inv Nr 67 Notulen der voor-vergadering van de Jaarlijksche Algemeen Vergadering van Aandeelhouders in de NV Mij te Exploitatie van de Suikeronderneming 'Somobito', gevestigd te Soerabaja, gehouden op Vrijdag 31 Mei 1940 te 's-Gravenhage.

⁶³³ In this and in other cases, as the Directors of the company were the Directors of the Colonial Bank and the Delegate in the Indies was the Bank's Head Agent in Soerabaja, the payments from this company would be added to the payments that the Bank's Directors and Agent received from the Bank.

⁶³⁴ ARA 2.20.04 Kol Bank. Inv Nr 1030. Cult Mij Kanigoro. Notulen Commissaris-vergadering 9/6/2018/12/24, 14/2/25, 16/12/26, 19/12/29.

⁶³⁵ ARA 2.20.04 Koloniale Bank. Inv Nr 881. Item dated 17/1/30.

⁶³⁶ Taselaar 1998: 104-5.

Director of Finance) was employed as the Syndicate Chair from the end of 1920 until 1927 at f.60,000 annually plus an initial 80,000⁶³⁷

G. PROFITS AND DIVIDENDS

These varied as the market changed, and differed between companies. An indication of these variations and differences closer to the factories than for the larger companies is shown in the figures for several small owning companies during the 1920s and 30s.

- The company owning *Padokan* and *Barongan* had given its consignment contracts and Directorship to the Principalities Plantation Company, which was paid 5% of profits for the latter task, but kept its Board, and their 5%, in the hands of a succession of two or three Weynschenk family men and an Internatio representative. It paid dividends on issued capital from 1924 to 1929 (to the nearest percent) of 53%; 39 (f.1,300,000); 16 (530,000); 36 (1,200,000); 28 (930,000); and 20% (f.660,000) then nil in 1930 with increasing losses for several years thereafter (See the Annual reports of the company).
- *Tjokro-Toeloeng's* company originally paid 10% of profits to the Directors and to the Board Members, then combined these in the 1920s and paid them 20% in total. Shareholders were getting 30%, 24, 44 and 75% in 1918/9, 1921/2, 1923 and 1924 while European and Native employees were sharing profit-shares or bonuses of 175,000 and 21,000 guilders respectively in 1921; 61,000 and 6,000 in 1922; 132,000 and 12,000 in 1923; 211,000 and 16,000 in 1924. (See the Annual reports of the company.)
- *Djatiwangi's* Director, W.F. Zuur, living in Bandoeng, and Board Members, J.C. Zuur, in Semarang, and representatives of Tiedeman & Van Kerchem and the NILM, shared 42,000 guilders (2/3 to the Director) in 1922, with 192,000 paid out to shareholders - including both Zuurs; 39,000 and 480,000 respectively in 1923; 36,000 and 480,000 in 1924. The Director and Board Members continued to be paid f.36,000 each year until 1929 when the sales problems started, profits dropped and they got 22,000. Shareholders were paid f.192,000; 480,000; 480,000; 288,000; 240,000; 480,000; 240,000; and 96,000 over the same 1922-9 period. In 1930 the long-time Director moved to the Hague and transferred the company seat there, the two representative Board Members being replaced by the NILM in Amsterdam and another. Poor sales, in spite of selling some outside the VJSP to a local Chinese buyer, produced a f.276,000 loss. In 1931 reducing planting and being able to reduce Native wages, with claims that their cost of living had also dropped, reduced losses which were still higher than in 1930. It planted a small

⁶³⁷ BENISO Secretary to Management Committee 1/10/1920.

amount in 1933 then not again until 1936 and thereafter. (See its annual reports until 1931 in the Hicks Collection.)

- In 1924 the small, then Japanese-owned *Gedaren*, paid 102,000 guilders in profit-shares to its Administrator and European employees, 12,000 to its Director, the Straits und Sunda Administratiekantoor, and 510,000 to its single shareholder, the Japanese Sugar Refining Company (Dai Nippon Seito Kabushiki Kaisha), which provided its Board Members. In 1925 it increased its issued capital from f.600,000 to 1,700,000, its existing shareholder taking up the new issue, and started a massive expansion of its factory and planting while paying f.48,900 in profits to Administrator and European employees, about 6,000 to the Director and 289,000 to shareholders. With the expansion costs and some technical problems there were no profits in 1926 but the payments returned in 1927 to f.106,000 for the Administrator and other European employees, 13,000 to the Director and 510,000 to shareholders, then 74,500, 9,000 and 408,000 respectively in 1928. The factory continued to operate but unfortunately the annual reports are missing for 1929-1936. In 1937 the same office was still acting as Director, the same Japanese company owned it and was providing two of the three Board Members, and the operations had been cut back to about half of the previous maximum, retaining the best grounds. It had produced more sugar than its government allowance for export but had profitably sold the excess to a local molasses factory. Earlier plans to produce a lower quality product with greater sales possibility for refining had been changed due to the Chinese-Japanese battles so production had been changed mid-way to high grade sugar. To a large (f. 589,000) carryover loss from 1936 was added a smaller one (f.38,000) for 1937. In 1938 its operating costs were f. 492,000, including a profit-share of 2280 to European employees and a bonus of 1200 to Natives, with an overall small operating loss of about f.3000. However its carryover loss, born by its creditors, mainly its Japanese owning company, was now f.541,000, and it had reduced the issued valuation of its share capital from f.1,700,000 to 900,00, which was included in a total writing off over the last few years of about f.3,400,000.
- The small *Sedatie* had 12-15 European employees, the Colonial Bank as its Director and its Surabaya-seated Board consisted of a member of its owning Hill family and two others, mainly a succession of ex-Administrators. It had put in expansion requests by the mid-1920s but these had still not been determined by 1930. 67,000 guilders were paid in dividends (12%) for 1924; 33,600 (6%) for 1925; 28,000 for 1927; 28,000 for 1929; then 16,000 lost on the 1930 operations. Its 1930/1 planting was up to its normal maximum but there had to be a cut back under the Chadbourne Plan for 1931/2. This was its last harvest as the Director and

Board predicted it could not be operated profitably in the foreseeable future. The company sold its planting concession rights to a nearby factory in 1934, and its official permission to operate was withdrawn in 1936. A remarkable feature of its payments was the large amount for the local population relative to shareholders. In the early 1920s it had put aside an initial f.54,000 as the basis for a fund for the benefit of the local population to be allocated after discussion with the Resident of Soerabaia and the Assistant-Resident of Modjokerto, its local Regency. f.2500 was spent in 1924; 17,000 in 1925; 22,000 in 1926; 7,300 in 1927; nearly 17,000 in 1928; about 6,000 in 1929; and over 8,000 in 1930. (See the Company annual reports).

It should be noted that dividends can be misleading as a measure of profitability. They were reported as a percentage of the face value of issued capital which was likely to be only a fraction of the effective capital valuation of the company's property. The former amount stayed constant unless there were new capital-raising or writings-off, the latter was a varying figure continually being written down from depreciation and being increased by the renovations and new purchases which were normally paid for from retained profits rather than from new capital-raising or other loans. As the size and value of the factories and transport networks was increased during the twentieth century the issued and invested capital values increasingly diverged, with the latter often up to four to five times the former by the 1920s. Thus the dividend yield on the capital face value of shares could be several times the yield from the total capital that had been invested. An example is given by *Tandjong Tirto*.⁶³⁸ Its dividends over the 1905/9, 1910/14, 1915/20, 1921/4 and 1925/9 periods expressed as percentages of the company capital and actual capital were (to the nearest percent) 23 and 17; 19 and 7; 75 and 17; 18 and 7; and 23 and 5 respectively.

The relationships between the value of the shares and the capital value of the enterprise were mostly opaque as the shares in most companies were not traded, so did not have a publicly tradeable exchange value. When they were exchanged this was mostly by inheritance or in a conversion of debt to equity from an indebted share-owner to a financier. In this latter case the exchange normally took place when the enterprise was in a distressed business condition so the exchange value of its shares was low.

H. WAGES OF NATIVE PERSONNEL

⁶³⁸ In its Gedenkboek 1930: 21

These are included here for comparative purposes. The European and the Native wages scales did not overlap, the mostly highly ranked and trusted Native employee with the longest service would not be paid as much as the lowest ranked European who had just been appointed.

There are many reports of the amounts paid to casual labourers and foremen at individual factories and regions over the decades of the twentieth century. They varied significantly at different times, places and for the work carried out, with the widespread 20-25 cents a day for daily-paid coolie male labour and less for women and children referring to the minima and being below the piece-work rates, especially for the most arduous work. Casual coolie labour might be provided with sheds to sleep in and perhaps food if labour was difficult to get. Rather than always criticising the low day wages paid to coolies by the industry, at times these ("for much harder work") could be used to justify reducing what the government paid.⁶³⁹

There is much less available about permanent Native employees.⁶⁴⁰ The first nearly complete survey of their wages was in 1921. The JSWB was established in 1920 and the next year carried out a survey of the wages paid to Native employees at all its members' factories.⁶⁴¹ The figures referred to the conditions early in the 1921 campaign and were received from 150 of the 183 factories working then. Unlike those for European employees these rates were not prescribed by the JSWB but were up to the discretion of the employing factory or its managing company.

Permanent Native workforce	f./m	Campaign Native workforce	f./m
Clerks	41	Factory coolies (m)	17
Head clerks	86	ditto (f)	14
Cashiers	94	ditto (j)	11
Office boys	24	Factory group mandurs	23
Laboratory workers	38	Weighbridge mandurs	26
Head lab. workers	85	Chinese assist. 'cooks'	54
General hands	22	Chinese 'cooks'	97
Tukangs (artisans)	41	Chinese head 'cooks'	125
Head tukangs	82	Native assist. 'cooks'	30
Warehouse mandurs	37	Native 'cooks'	73

⁶³⁹ From 25 to 20 cents/day, as recommended by the Resident of Madioen and agreed by the Governor of the East Java Province for 1933 (MVO Resident Madioen 1934: 25).

⁶⁴⁰ As well as in factory records, other generalised information on Native employment from management perspectives is available in Levert 1934 and 1937.

⁶⁴¹ Java Suiker Werkgevers Bond(1921).

Field mandurs (foremen)	25	Asst. field mandurs	15
Head wagon mandurs	33	Cutting field mandurs	22
Transport mandurs	28	Seedling mandurs	20
Railway mandurs	28	Wagon mandurs	26
Coolies	14	Asst. railway mandurs	18
All permanent employees	31	All campaign employees	18
All Native employees		23	

In the original report all wages were converted to a cents per day equivalent and were intended to have been calculated inclusive of a number of provisions, such as free housing, free medical treatment, bonuses, and food supplied more cheaply, but exclusive of gratifications, which varied across the industry in a JSWB-advised standard policy from less than one to a couple of month's wages each year. For easier comparison with the figures for European employees the figures shown here have been converted to a guilders per month basis (30 day, as stated in the original).

It should be recognised that these were average rates. The wage lists and pension lists from individual factories show that there were great differences within each category. Differences of up to double within a category were not uncommon. Much of this depended on seniority.

(During the Depression the officially estimated cost of food for an adult was 2.5 cts/day [Secretariat 1932/3]).

APPENDIX 17 PROMOTION OF EUROPEAN STAFF

As the number of Europeans in each factory grew what started as a single position or a horizontal duplication of more or less the same position was differentiated into levels of responsibility and then into a pattern of successive positions. Employment in the sugar industry evolved into a recognised career structure. Promotion remained dependent on the discretion of the Administrator. In at least the major companies this came to include a formal annual report using several prescribed criteria, including "suitability for promotion".⁶⁴²

The demand for formal training increased. Early in the 1920s the literature produced by and from the employers stressed that an employee did not need a diploma to be able to be promoted up through the ranks, it was experience and personal qualities that were essential - although a diploma was an advantage.⁶⁴³ By the late 1920s it was asserted that it would be unlikely that someone would get to the highest ranks without being able to demonstrate by way of diplomas they had enough technical knowledge of their area of the activities at their disposal unless they had exceptional personal qualities.⁶⁴⁴ In 1939 it was asserted that sound pre-training was demanded to be able to climb to higher ranks.⁶⁴⁵

⁶⁴² The large managing companies produced their own standardised report forms. For example, at the NHM-managed *Doekoewringin* in the late 1920s and 30s: 1. Technical knowledge (Theoretical and practical education); 2. Performance in present position (Understanding of organisation, sense of order and economy, ambition, etc); 3. General personality (Trustworthiness, sense of duty, etc); 4. Knowledge of Native language and ways; 5. Getting on with Native personnel and the people in general; 6. Getting on with chiefs, colleagues and others; 7. Suitability for higher rank; 8. Any other information considered relevant.

⁶⁴³ It was pointed out that there were examples of men who had reached the highest ranks, as administrators, without formal qualifications, and that someone who had started as a weighbridge employee with only a lower school education, spent some time there followed by several years in the cutting fields and then time as an assistant field employee and applied to be a field employee, as a rule would be preferred over someone who had a diploma from the Wageningen Higher School but had not practical experience. A diploma showed only that its possessor had gone through a specified course and made the required amount of knowledge his own - and how useful he was would only be found out by time. Nevertheless, someone with experience and a diploma would have a better chance than one with only experience. (Tichelaar 1924-5: Inleiding 1198-9. He was the head of the Economic-Statistics section of the JSWB.)

⁶⁴⁴ eg. Van der Mandere 1928: 84. (He was employed by BENISO, inter alia for public relations activities.)

⁶⁴⁵ Th A H Claassen, 'Een woord aan hen die in de cultures willen gaan', pp50-51 in Schnebblí 1939. He also suggested that those who had gone through the agricultural schools of Wageningen, Deventer or Boskoop would find it easier to find a place but that this would not guarantee to make their career and they might get a cold shower on any self-infatuated over-confidence that they 'knew more than the boss'. Technically trained young men, with practical experience in mechanical or electrical engineering had a great advantage and were worth their weight in gold on an estate.

However, it was not clear which diplomas were more desirable for which purposes and the report of the JSWB's official 1923 survey of European staff (Tichelaar 1924-5) consciously avoided this question. It appears clear that most diplomas were gained as initial, entry qualifications and there was little demand for subsequent, in-service qualification - with the important exception of the Syndicate's diploma for sugar chemists from 1908. In the early 1920s there was discussion about the desirability of a comparable Syndicate diploma in agriculture as an extra recognised qualification for field employees but it appears that nothing was done about this for nearly two decades, until the 1940/1941 sugar course. The same discussion also involved the relative merits of Dutch diplomas and the Syndicate diploma and about how much need there was for the setting up of a Secondary Technical School in the Indies to train to the technician level in various areas.⁶⁴⁶ Again nothing happened until 1940 when such a School was promised for 1941. Significantly all of the qualifications or desirable training referred to were related to agriculture and/or technical knowledge and skills, none to any administrative, management or other social areas.⁶⁴⁷

In the post-boom recession of the early 1920s there were concerns expressed publicly about career prospects in the industry. A reassuring response was given about the good possibilities for a variety of Dutch-trained young men in spite of their not yet knowing the local language or ways and in spite of there being some European unemployment in the Indies.⁶⁴⁸

⁶⁴⁶ These discussions were at the end of a combined meeting in 1922 of the three sections of the Association of Chemical, Technical and Agricultural Advisers of the Java Sugar Industry, made up of employees of the Experimental Station and the larger managing companies. (Tichelaar 1924-5: Inleiding 1197).

⁶⁴⁷ The courses specifically for work in "the tropics", "the colonies", or "the Indies" might have a subject on the legislation or legal system or an introduction to the society but this would be all.

⁶⁴⁸ "The industry includes among its roughly 4000 European employees men of different training, agriculturalists from Wageningen and engineers from Delft work together with those who have no diploma or only the lowest secondary school qualification. The previous training decides in many respects, but not entirely, which career the employee will make; if it is sufficiently broad then he will have a quicker promotion, where his character fits him for the higher ranks. Of the 4000 sugar employees 76% come from Java, only 24% from Holland. It can be taken that the latter have, on average, a better training while the former have the advantage that they have a better knowledge of the country, people and, above all, the language that provides much difficulty for the newcomers. ... Without the high developed level of her employees the Java sugar industry can never have reached the scientific level on which its bloom depends. If the level is to be maintained then the supply of well grounded workers must never stand still.

If we assume that the 1000 workers who have come from Europe serve an average of 15 years thus there is a need for at least 66 Europeans a year. Now it does not help the industry that there are a couple of hundred unemployed walking round Java as the special training that is needed will not be found among them. The industry has a continuing use for well trained

In 1911 the first edition of a positive handbook intended to inform people about opportunities in the Java sugar industry had claimed that, after starting as a trained chemist or mechanic, relatively rapid promotion up through the ranks of factory and then field was quite normal.⁶⁴⁹ Going out at 20 to 23 years old was recommended. It also cautioned that the transition from factory to field ranks involved a significant initial drop in income and that most employees would never become an Administrator, not because of unsuitability or less knowledge but as there was little opportunity. Only minor changes in promotion prospects were made in the 1917 revision and they were not included in the 1929 edition.⁶⁵⁰

However, the responses to the 1923 JSWB survey indicated that promotion had been, or by then had become, much slower and varied widely between individuals. In the mid-1920s a Sugar Union official claimed promotion was much slower that it had been twenty years previously.⁶⁵¹

First Employees had taken an average of over 11 years to have reached that position after starting in sugar, most having started as chemists or, fewer, as mechanics rather than immediately in field positions. Although there were wide variations promotion had generally been quicker for those with a diploma.

The large category of Field Supervisors had served an overall average of about 7 years beforehand - the Dutch-qualified less, the only Indies-qualified more than the unqualified, the latter mainly having come into the position more directly from the lower field or factory positions rather than having worked up within the factory's chemist or mechanic hierarchies.

chemists, second machinists with experience and assistant book-keepers with good diplomas. Moreover, an average service time of 15 years is longer than the actuality, while the 24% of Dutch in the work-force is liable to increase significantly.... Thus ... (pupils in) the education institutions in Holland ... can calmly follow their education without harbouring fears that there will be no place for them in the sugar industry on Java" (Van Harreveld 1922). The writer had moved from being secretary of the Research Station to be Secretary of the JSWB.

⁶⁴⁹ The book was very well informed from the management perspective, being written by Dr H C Prinsen Geerligs (long-experienced in the industry in Java, for many years head of the Syndicate's Experimental Station, then moving back to a Netherlands base as the Dutch representative of the Station, and continuing to travel extensively and write even more extensively about sugar (publishing 58 books and about 9,500 periodical articles by his 70th birthday in 1934!). The subsequent two editions in 1917 and 1929 were brought up to date by senior participants in the industry, a current Fabrication Chief on leave in the Netherlands, and a combination of the Secretary of the Beniso and an ex-Administrator, ex-Director of a sugar company respectively.

⁶⁵⁰ Plus the addition of a career possibility as a technical or chemical adviser to a company (and thus living in a large town).

⁶⁵¹ G A Tiessing, "De Suiker-employé", pp 6-7 in the special Suiker-Nummer of *De Indische Post* 27/9/1924.

First Mechanics had spent an average of about 7 years as a Second, but with great variations, from less than one to twenty years. The Dutch-qualified had averaged less than six years, the Indies-qualified about eight and a half.

Fabrication Chiefs had averaged just over five years as a Chemist, about a year less if Dutch-trained and a year more in only with an Indies diploma. As usual individual cases varied widely, from less than two to nearly eleven for those with Dutch and less than two to nearly seventeen with only Indies qualifications. The JSWB's intention of encouraging the gaining of higher pre-employment qualifications was served by a further analysis indicating that the Dutch agricultural programs plus their additional sugar courses preceded much faster promotion.⁶⁵²

⁶⁵² The writer compared the average times before promotion for those who had been through the courses at the Amsterdam Sugar School, the Amsterdam Secondary Technical School, the Wageningen Higher Agricultural School and the Deventer Colonial Agricultural School and claimed (somewhat fallaciously given the other factors likely to have been involved) that the extra year's Sugar Laboratory course at Wageningen or Colonial Sugar Course at Deventer were more than made up by faster promotion.

APPENDIX 18 COUNTRY OF BIRTH OF WIVES OF EUROPEAN STAFF

Given the relative lack of Dutch-born women in the Indies, especially of those immigrating without a husband, it would be expected that single European employees would be more likely to marry Indies-born women than go off overseas to find one or make arrangements to have one come out. Marriage to a Dutch-born woman would most likely have been found among those who had married before coming out to Java. Therefore, it is not surprising that an analysis of the places of birth of the wives of all the European employees who worked on the Colonial Bank's sugar estates and had a record in the Bank's pension fund shows a predominant proportion of Indies-born wives of men in most of the job categories. Moreover, the picture they give is biased against showing those in the lowest categories (a) as they note only the final position held or when pensioned, and (b) eligibility for a pension and thus a pension record was not provided for those in casual or short-term employment. Given the social history of Java it is likely that the proportion of these with Indies-born wives would be higher than the average.

In the Colonial Bank archive are the records of the pension scheme it ran from 1916 for its employees and those in the factories related to it, often under its Direction. The records include those for all eligible staff, permanently employed after 1916 and European or legally equivalent. The records are in various files: those receiving pensions; those who had left and died; deferred pensions, left but not yet reached 50 years old; widows and orphans; war widows and orphans, of employees who died during the Japanese Occupation; wives and children of pensioners; wives and children falling outside the normal provisions; ...⁶⁵³ They have been combined in the following. As the records refer to only the employee's final position they are unrepresentative as cross-sections at any particular time and are biased towards higher promotional positions, and against the lower positions which were more likely to be temporary.

Of the 17 married Administrators whose wives' birth-place was noted, 12 had Indies-born wives, 5 Dutch-born (another 5 were not recorded). Among the other administrative employees 4 of the recorded Book-keepers had an Indies-born wife and 1 a Dutch-born, there was 1 of each among the 2 Assistant book-keepers, while all 7 of the Warehouse employees had Indies-born wives (3 of whom were recorded as "Native").

There were 3 each Indies- and Dutch-born wives of First mechanics but 3:1 of Second mechanics (with one wife of unknown birth-place in each category). Of the ten chemical personnel 4 had Indies-born, 6 Dutch-born wives.

⁶⁵³ They are in ARA 2.20.05 Koloniale Bank. Inv Nrs 245, 282-92

2 of the 3 First Employees' wives had a recorded birthplace, both in the Netherlands. Of the 51 Field supervisors 33 were married to Indies-born women (6 of whom were "Native"), 6 to European-born, 11 to wives of unknown birth-place and 1 to an American. There were only 5 Assistant field supervisors recorded, 4 of whose wives were Indies-born (including 3 "Native") the other unknown.⁶⁵⁴

It was also noticed that the Chemical Adviser, both Technical Advisers and the Bank Agent recorded all had Indies-born wives, as had an ex-Superintendent of factories who became a Board Member of the Bank, and both of the recorded European employees in the Soerabaja office (including one German) while both "Chinese" employees there had "Chinese" wives.⁶⁵⁵

In other section of these pension records, those of ex-employees who had left and died, the great majority of wives' birthplaces were not given but of the 60 that were 44 had been born in the Indies and 16 in the Netherlands.

Finally, an apparently complete pension list for 724 Koloniale Bank employees (most of who had been working "in sugar") indicated that almost all wives were "European", apart from 19 "Natives" or "Non-Europeans", and 2 "Chinese" (both of whom were married to "Chinese with equal status to European" working in the Soerabaja Head Agency office of the Bank).

⁶⁵⁴ One of the supervisors was a "Native with equivalent status to European".

⁶⁵⁵ Both of the Chinese employees were "With equal status".

APPENDIX 19 MECHANISATION

Mechanisation of ground working had been trialled and reported on from early in the twentieth century and was a continual topic of interest from then.⁶⁵⁶ Individual Administrators, Van Vloten at *Sempalwadak* in particular, were prominent, with the NHM and Colonial Bank among the major companies supporting importing and trialling and the Syndicate setting up a committee to investigate and report. The Syndicate also provided large subsidies.⁶⁵⁷

However, no significant changes resulted during the entire period. The major interest in using machinery to plough, cut channels or otherwise prepare the ground anew for planting cane was in its potential as a reliable replacement for hand labour. Until the 1920s there were frequent and increasing problems reported in finding and retaining enough field labour at the appropriate time to open up the ground for subsequent planting. By 1920 the machinery, especially the tractors, were successful on some of the lighter grounds but not on the heavier - and their use was usually still more expensive than using hand labour. In spite of urging from Van Vloten, Dr. Van Harreveld, then Director of the Agricultural Division of the Research Station, remained unconvinced and declined to provide active support or resources to expansion of use or research in this area. After the early 1920s the deteriorating market situation for labour reduced the factories' difficulties, and costs, there was relatively little improvement in the equipment and interest flagged. In 1929 an official Communication from the Research Station surveyed current usage and demonstrated management's choosing against mechanised ground-working.⁶⁵⁸ By the end of the 1920s about a quarter of the factories possessed one or more tractors or cable systems but only a

⁶⁵⁶ In 1905 a paper by G J B Blekkink (then at *Sempalwadak*) on "the significance of the European plough for the cane cultivation in theory and practice" was presented at ASNI's Sugar Congress, and J F A F C van Moll published a report in the *Archief* on the first trials of a combination of a cable and a channel plough at *Tjomal*. Eight years later there were *Archief* reports of the same combination, now at *Kalimati*, and the first caterpillar tractor trials reported the next year. Other areas of mechanisation, such as the unloading of cane from the field into the mills (eg. Tönjes 1916), were also surveyed and reported.

⁶⁵⁷ Collected from a payment/hectare. By 1917 the statutory maximum of about f.1/HA had been reached with this having been enough to raise the f.50,000 previously expected but not enough for the f.88,000 now recommended by Van Vloten, the Chair of the Syndicate's committee on mechanisation trials. The Syndicate Chairman therefore tried to get this limit annulled.

⁶⁵⁸ Demandt E, "De Stand der Mechanische Grondbewerking bij de Java-Suikerrietcultuur tot het Oogstjaar 1929", *Medeelingen van het Proefstation voor de Java-Suikerindustrie* 1929, No 16, reprinted in *Archief* 1929: 871-913. Demandt was the Chief of the Stations' Test-field Service. Among his summary comments was "Far and away most estates use their equipment only so they are not left to rust and because they had already purchased them" (p872).

minority of these were being used.⁶⁵⁹ Only seven factories were working more than 10% of their fields with machinery, with less use in 1929 than in 1928.⁶⁶⁰ Less than 1% of the total planted area was being worked mechanically.

Thereafter, the economics of the Depression made the use of labourers more attractive than the machinery of the time and the issue disappeared. As mentioned in a Resident's transfer report in 1932, "With regards to problems of getting labour during the rice-harvest a lot has been thought about mechanical ground-working, but apparently that is dearer than hand-labour".⁶⁶¹

From the beginning of the twentieth century there was a shift from ox and cattle drawn carts to steam and, gradually, some diesel locomotives pulling iron-framed wagons on light rail tracks - with moveable tracks extending the network beyond the permanent track system closer to the factory itself. Nevertheless the changing picture was complicated as the shift was neither quick nor complete - most estates were still using mixtures of cart and rail and many were also using oxen to pull railway wagons by the mid-1920s.⁶⁶² This required more and different mechanical engineering skills and training among European and Native employees. Decisions about track-laying and maintenance, engine and wagon purchase and maintenance, deployment and supervision of and by one or two European and many Native workers for rail, engine and train work were all added to the duties of management - as was continuing choices between use of locomotive and ox traction and between rail and the cart transport.

⁶⁵⁹ Eg. See Soeters W H L, "Machinaal geulen graven voor suikerrietcultuur" *Archief* 1913: 1700-6; Van Vloten J F W, "De caterpillar", *Archief* 1914: 1009ff; Van Vloten J F W, "Mechanische grondwerking" *Archief* 1915: 1825-1841; Priebee C, "Eenige medeelingen omtrent de mechanische grondbewerking toegepast op de gronden der SO Soemberhardjo", *Archief* 1917: 57ff; Vloten J F W van and Neurdenburg J, "Rapport door de Enquête-Commissie voor de Machinale Grond-bewerking op Java" *Archief* 1920: 2021-2026 (also see the original report from Van Vloten, the Chairman of the Committee, to the Chairman of ASNI 22/9/1920 including Van Harreveld's 18/7/1919 letter to him); Vloten J F W van (1922), "De Mechanische Geulengravers", *Archief* 1922 I. 638-646; C E van der Zijl, "Overzicht van der stand der mechanische grondbewerking op Java tot het begin van het plantjaar 1924", *Medeelingen van het Proefstation* no 9. 1924, reprinted in *Archief* 1924: 269-317. Although tractor-pulled machinery was more clearly the more likely possibility for the future than the massive cable-drawn systems both still had their advocating users and enthusiastic suppliers (eg. see the figures in Demandt 1929, the merits of the Fowler cable-plough system in *Archief* 1930: 879ff and the use of Gevek and John Deere ploughs with a caterpillar tractor in *Archief* 1930: 1151ff).

⁶⁶⁰ Among them the three Aments' factories *Ardjowinangoean*, *Gempol* and *Paroengdjadja* (managed by Internatio). The others were the Sugar Plantation Company's *Assembagoes* (managed by Kooy & Co), the Bosch and Van Blommesteins' *Kalimati* (NHM), the Ettys' *Boedoean* (Kooy), and de Groot's *Soerawinangoen* (NHM). Most stopped planting after 1931.

⁶⁶¹ MVO Res. Probolinggo 1932: 32.

⁶⁶² Ferguson 1925.

During the 1920s factories had become more or less self-sufficient in fuel for steam, including for their steam locomotives. In 1922 an average of 15% still had to come from wood, coal or cane leaves, but by 1930 applied research on cane processing had not only provided for all fuel needs for the factory itself to come from milled cane residue (ampas or bagass) but enough surplus was produced for the steam locomotives.⁶⁶³

Electric power and its management requirements had come in for lighting early but using the more massive installations of electric-power for machinery, such as in driving the centrifuges instead of steam, came much later and gradually. It was commented in 1912 that there was still little of this, by the late teens there were reports of its spreading use for various purposes, and Oei Tiong Ham's *Redjoagoeng* was the first factory to be completely converted to electric power in the mid-1920s.

⁶⁶³ Pritzelwitz 1932.

APPENDIX 20 REPORTS TO BENISO ON THE DORDRECHT SECONDARY TECHNICAL SCHOOL SUGAR TECHNICIAN COURSE

The BENISO-delegated engineer and "ex-planter" Ir. Harloff was very favourably impressed in his 1919 report. In this he mentions he had also been impressed back in 1913 on his first visit to the then-new institution. His latest observations of exam and practical results, the relationships between students and staff and between staff and director, his discussions with students including assessing their abilities in English and German, their knowledge of new findings reported earlier that year from the American industry, the depth of content of all 19 subjects studied has impressed him with the success of the course in producing future employees who are well-fitted for careers as both chemists or mechanics in the industry. He preferred this to the Deventer and Wageningen schools which provide more for an agricultural and chemist combination as, from his experience, it is easier to learn agriculture after training in the other two than vice versa. However, he was concerned about the very small number choosing this sugar technician course, only 3, 10% of the total enrolment. The small proportion could be partly explained by the number of institutions in the Netherlands providing comparable training for this technical specialisation being more than for others but the small absolute numbers could indicate that a four year course is putting off some who want to get a place in the Java industry more quickly and so look for an institution with shorter courses. He considered it unquestionable that the Syndicate/BENISO should continue to subsidise the course given the rising demands of the times as well as having a moral duty to do so, and to promote it to its Members more than had been the case until then. He concluded with rough calculations that, with 180 Java factories each of which had on average 4 chemists and technicians who would be promoted out of these positions within 5 years, about 144 new entrants were needed each year. About half of these would come from Java leaving about 72 needed to be graduating from Dutch institutions each year - that is an average of about 12 from each of the 6 recognised ones (MTS Amsterdam; MTS Dordrecht; Suikerschool Amsterdam; Wageningen; Deventer; Delft) for the Java cane industry alone, plus those for the beet sugar industry. Thus obviously the number studying at Dordrecht is too small and the General Syndicate in Java and BENISO in the Netherlands should try to get a better and more logical relationships between these numbers.

The numbers did increase somewhat. Four years later there was another favourable report on the teaching and results for 1923 from Ir. A.G. Böeseken, Director of the Klaten Plantation Co, ex-Administrator, and representative of BENISO. Four of the six in the Sugar Industry course had passed. In his opinion the

course produced graduates with sufficient breadth and experience to be suitable for initial employment in the sugar industry as either second mechanics or assistant chemists. It was pointed out that, since the course started, of the 29 sugar technicians who had graduated 21 had found places in Java factories, whereas only 5 of the 77 toolmakers had so there were still opportunities for the Java industry to take more advantage from these more general courses. Böeseken ended his report cheerfully by mentioning that, after some years in which there were only a few coming through, there were currently 10 students in the sugar industry stream in 2nd year, 11 in 3rd and 10 in 4th year so more of these specialised graduates can be expected in forthcoming years.

(Harloff's report of 13/7/1919 was enclosed with the materials circulated to the Members of the Management Committee of BENISO, 18/7/19; Böeseken's was "Middelbare Technische School te Dordrecht", *Archief* 1923: 1065-6).

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B. Personal Archive Collections

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- J W Meyer Ranneft. Held in the Algemeene Rijksarchief, Den Haag. (A microfilmed selection is in the Monash University Library, Melbourne)
- J Stokvis (Especially newspaper cutting collections Inv. Nrs 195 [Fatherland Club], 206-7, 211, 394-5 [Strikes, unions, and plantation unrest]; and Inv. Nr 293 [Material on the Sarekat Islam.]). Held in the IISG.

C. Memories van Overgave (Indies government officials' Transfer or Hand-over Reports)

(Combined from the Ministerie van Kolonien and the KIT collations [both microfilmed in the ARA the latter also in Flinders and Monash University Libraries] together with some from the ARA J W Meyer Ranneft Collection [as microfilmed and held at Monash].)

- *Regencies/Districts* (reports from Assistant-Residents, Controleurs, Regents or Wedonos):
Grisee 1916 [Meyer Ranneft Collectie. Inv. No 3]; Kraksaän 1912 [Meyer Ranneft Collectie. Inv. No 2]; Pati 1928 [Meyer Ranneft Collectie. Inv. No 23]; Patjitan 1926, 1930; Tegalombo (Patjitan Residency) 1930; Ponogoro 1900, 1908, 1913, 1916, 1926, 1929.
- *Residencies* (reports from Residents):
Bagelen 1930, 1932; Banyoemas 1922, 1925, 1928, (North and South) 1932, 1933; Besoeki 1913, 1918, 1919, 1922, 1926, 1938; Blora 1930; Bodjonegoro 1931; Bondowoso 1931; Cheribon 1907, 1911, 1915, 1919, 1922, 1925, 1930, 1932, 1933, 1936; Indramajoe 1931; Kediri 1934; Kedoe 1922, 1927, 1933;

Koedoes 1932; Madioen 1931, 1932, 1934, 1939; Modjokerto 1931; Patjitan 1930; Pekalongan 1922, 1926, 1931, 1936; Ponogoro 1930; Probolinggo 1932; Rembang 1924, 1928, 1931, (Japara-Rembang) 1932, 1936; Semarang 1930; Tegal 1930.

- *Provinces* (reports from Governors):
Midden Java 1930, 1933; Oost Java 1931, 1933.

D. Series and archives

The following were consulted at the named libraries or archives:

Algemeen Rijksarchief (ARA, General State Archive), Den Haag

- Algemeen Syndicaat van Suikerfabrikanten in Nederlandsch-Indië (Syndicate). ARA 2.20.33.02
- Bond van Eigenaren van Nederlandsch-Indisch Suikerondernemingen (BENISO). 2.20.33.01
- Cultuur Maatschappij SF "Kadhipaten". 2.20.08
- Java Suiker Vereeniging (JSV). ARA 2.20.09.01
- Koloniale Bank. ARA 2.20.04, 2.20.05 (including for *Kanigoro, Bandjaratma, Gending, Maron*, and Pension Scheme as well as general Koloniale Bank archives).
- Maatschappij tot Exploitatie der Baud-Landen. ARA 2.20.37.03
- Michiels-Arnold Cultuur- en Handelmaatschappij. ARA 2.20.02.02
- Ministerie van Kolonien. ARA 2.10.36
- Nederlandsch-Indische Vereeniging voor den Afzet van Suiker (NIVAS). ARA 2.20.09.03
- Nederlandse Handel-Maatschappij (NHM). ARA 2.20.01 (including archives for companies operating the *Doekoewringin, Kebon Hardjo, Ketanggoean-West, Klampok, Ploemboen/Soerawingangoean, Koning Willem II, Peterongan* and *Tersana* factories, and for VISOCO, BENISO and JSWB)
- NV Maatschappij tot Exploitatie der Verenigde Majanglanden. ARA 2.20.07
- NV Maatschappij tot Exploitatie van de Suikeronderneming Tjomal. ARA 2.20.39
- Ondernemersraad voor Indonesië (previously Ondernemersraad voor Ned.-Indië, ONRANI). ARA 2.20.02.01
- Vereenigde Javasuiker-Producenten (VJSP). ARA 2.20.09.01
- Vereeniging Proefstation voor de Java-Suikerindustrie (Research Station). ARA 2.20.33.03

Bibliotheek Rijksuniversiteit Leiden (Leiden University Library)

- Jaarboek voor Suikerfabrikanten op Java (1896 ...)

Koninklijke Bibliotheek (KB, Royal Library) Den Haag

- De Indische Courant

Koninklijk Instituut voor Taal-, Land- en Volkenkunde (KITLV, Royal Institute of Linguistics and Anthropology), Leiden

- *Archief voor de Java-Suikerindustrie* (1893-1907), *Archief voor de Suikerindustrie in Nederlandsch-Indië* (Orgaan van het Algemeen Syndicaat van

Suikerfabrikanten in Ned.-Indië) (1908-1934), *Archief voor de Suikerindustrie in Nederland and Nederlandsch-Indië* (1940-41/2)

- *De Fakkel* (1940-1)
- *Handboek voor Cultuur- en Handelsondernemingen in Nederlandsch-Indië* (1888-1940)
- *De Indische Navorscher* [: Orgaan van de Indische Genealogische Vereniging] (1987...)
- *Sinar Hindia* (1919-24)
- *Timboel* [: Algemeen Periodiek voor Indonesië] (1927)
- Verslag over het (zevende) boekjaar (1899). Maatschappij tot Exploitatie der Kendalsche Suikerfabrikanten (1899-1904)
- Verslagen Handelsvereniging "Amsterdam" (1879-1922)
- Verslagen uitgebracht in de Jaarlijksche Algemeene Vergadering van Aandeelhouders in de Naamlooze Venootschap Maatschappij tot Exploitatie van de Suikerfabriek "Sindanglaoet" (1922-1933/4)

Koninklijke Instituut voor de Tropen (KIT, Royal Tropical Institute) Amsterdam

- *Overzicht nopens de Inlandsche Beweging in de suikerstreken op Java* (Nrs 1-67, 1923-1930)

Lembaga Ilmu Pengetahuan Indonesia (LIPI, Indonesian Institute for Sciences), Jakarta

(George L Hicks Collection of company annual reports)

Annual reports of:

- Algemeene Syndicaat van Suikerfabrikanten in Ned.-Indië (Syndicate, 1909-38)
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- Cultuur Maatschappij "Gedaren" v/h "A B Kraag" (1923-8, 1937-8)
- Cultuur Maatschappij "Kebon Hardjo" (1910-16)
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- Maatschappij tot Exploitatie der Suikeronderneming "Djatiwangi" (1901/2-1931)
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- Naamlooze Venootschap Internationale Crediet- en Handels-Vereeniging "Rotterdam" (Internatio, 1931, 1934-41)
- Naamlooze Venootschap tot Exploitatie der Cultuur-ondernemingen van E Moorman & Co (1920-51)
- Nederlandsch-Indische Landbouw-Maatschappij (NILM, 1884-1939)
- Vereeniging Javasuiker Producenten (VJP, 1918/9)

Perpustakaan Nasional Republik Indonesia (PNRI, National Library), Jakarta

- Circulaires der Soerabaische Vereeniging van Suikerfabrikanten (1892-3)
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- Jaarverslag van de Japarasche Vereeniging van Suikerfabrikanten (1880-4)
- Jaarverslag van de NV Machinefabriek BRAAT (1918/9-1926/7)
- Maandbulletin voor Suikerfabrikanten verzameld door Thierry Boom (1891-2)
- *Neratja* [: penjokong dan pembantoe kemadjoen jang lajak bagi Bangsa dan Tanah Air dengan djalan jang patoet] (several months of 1920 and 1924 [with new publisher] only)
- *Oetoesan Hindia* [: Soerat Chabar dan Advertentie] (several months in 1922/3 only)
- Publicatie van het Kantoor van Arbeid 1-11 (1927-35)
- Verslag over het jaar (1909) van de Afdeeling Pekalongan van het Proefstation voor de Java-Suikerindustrie (Chemische Afdeeling) (1909-11)
- Verslag uitgebracht in de Jaarlijksche Algemeene Vergadering van Aandeelhouders in de Naamlooze Venootschap "Suikerfabriek Tjoekir" (1896-1905)
- Verslag van de Onderafdeeling Banyoemas van het Proefstation voor de Java-Suikerindustrie (1912-4)
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- Verslag van der Directie van der NV "Suikerfabriek Kalie Klawing" (1893-5)

Pusat Penelitian Perkebunan Gula Indonesia (P3GI, Indonesian Sugar Research Centre, formerly Proefstation voor de Java Suikerindustrie), Pasuruan

- *Berita* (1989...)
- *Jaarboek voor Suikerfabrikanten op Java* (1908/9-1916/7)
- *Jaarverslagen. Proefstation voor de Java Suikerindustrie* (1898-1940)
- *Korte Mededeelingen van het Proefstation voor de Java-Suikerindustrie* (Nrs 74-100, 1925-7)
- *Laporan Tahunan P3GI* (1990-3)
- *Majalah Perusahaan Gula*, from XXX(1) 1994 changed to *Majalah Penelitian Gula*
- *Mededeelingen Proefstation in West-Java te Kagok-Tegal* (Nrs 2-100, 1892-1907)
- *Mededeelingen van het Proefstation voor de Java-Suikerindustrie* (1893-8)
- *Proefstation voor de Java-Suikerindustrie. Maandberichten (...1957)*
- *Verhandelingen voor de Leden en Mededeelingen van het Proefstation voor de Java-Suikerindustrie* (various years 1931-41)
- *Verslag Proefstation "Kagok" [Verslag over (1899) van het Proefstation voor Suikerriet in West-Java te Kagok-Tegal, from 1900 "te Pekalongan"]* (1899-1906)
- *Verslag van de Vereeniging het Proefstation voor de Java-Suikerindustrie* (1930...)