

***Evolving consciousness in leaders: Promoting late-stage conventional
and post-conventional development***

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Table of Contents

LIST OF TABLES	IV
ABSTRACT	V
DECLARATION	I
ACKNOWLEDGEMENTS.....	II
CHAPTER 1: INTRODUCTION TO THE PROGRAM OF RESEARCH	1
OVERVIEW OF THE RESEARCH AND ITS SIGNIFICANCE	1
AUSTRALIAN COMMUNITY LEADERSHIP PROGRAMS	4
RESEARCH PROGRAM	7
<i>Research questions</i>	7
<i>Research design</i>	8
<i>Researcher interests and actions undertaken to mitigate potential impacts</i>	9
MATERIALS AND METHODS	11
<i>Participants</i>	11
<i>Measures</i>	12
<i>Procedure</i>	18
COMMENT ON TERMINOLOGY.....	19
OVERVIEW OF THE THESIS	20
CHAPTER 2: LITERATURE REVIEW	23
INTRODUCTION AND OVERVIEW OF THE CHAPTER.....	23
LOEVINGER’S THEORY OF EGO DEVELOPMENT	27
MAJOR DIFFERENCES BETWEEN LOEVINGER’S AND KEGAN’S CONSTRUCTIVE DEVELOPMENTAL MODELS	37
COOK-GREUTER’S REVISIONS AND EXTENSIONS TO LOEVINGER’S THEORY	39
TORBERT’S ADAPTATIONS OF THE LOEVINGER MODEL.....	41
THE LIMITATIONS OF CONVENTIONAL CONSCIOUSNESS.....	42
THE RELATIONSHIP BETWEEN CONSCIOUSNESS DEVELOPMENT AND LEADERSHIP	51

THE PROCESS OF CONSCIOUSNESS DEVELOPMENT	58
<i>Overview of the models of Manners and Durkin and Palus and Drath</i>	58
<i>The equilibration model of consciousness stage transition</i>	62
<i>Crystallisations of discontent or desire</i>	64
<i>State readiness factors for consciousness development</i>	65
<i>Personality traits and consciousness development</i>	69
<i>Interventions to promote consciousness development</i>	75
SUMMARY AND CONCLUSIONS FROM THE LITERATURE REVIEW	84

CHAPTER 3: STUDY 1 - PERSONALITY PREFERENCES AND THEIR RELATIONSHIP TO CONSCIOUSNESS

DEVELOPMENT IN AUSTRALIAN LEADERSHIP PROGRAM PARTICIPANTS	88
STATEMENT OF AUTHORSHIP.....	88
PREFACE TO STUDY 1.....	89
ABSTRACT	90
INTRODUCTION.....	90
MATERIALS AND METHODS	101
RESULTS AND DISCUSSION	105
CONCLUSIONS	116

CHAPTER 4: STUDY 2 – PROMOTING POST-CONVENTIONAL CONSCIOUSNESS IN LEADERS: AUSTRALIAN

COMMUNITY LEADERSHIP PROGRAMS	119
STATEMENT OF AUTHORSHIP.....	119
PREFACE TO STUDY 2	120
ABSTRACT	121
INTRODUCTION.....	122
BACKGROUND TO THE RESEARCH.....	124
AIMS OF THE RESEARCH.....	138
MATERIALS AND METHODS	139
RESULTS AND DISCUSSION.....	145
SUMMARY OF THE RESEARCH OUTCOMES.....	153
LIMITATIONS AND ADDITIONAL SUGGESTIONS FOR FUTURE RESEARCH	155

PRACTICE IMPLICATIONS AND CONCLUSIONS	157
CHAPTER 5: STUDY 3 - TRIGGERS, TYPE AND TIMING: EXPLORING DEVELOPMENTAL READINESS AND THE EXPERIENCE OF RECENT TRANSFORMATIONS IN CONSCIOUSNESS IN AUSTRALIAN COMMUNITY LEADERSHIP PROGRAM PARTICIPANTS	161
STATEMENT OF AUTHORSHIP	161
PREFACE TO STUDY 3	162
ABSTRACT	163
INTRODUCTION	164
BACKGROUND TO THE RESEARCH	167
THE CURRENT RESEARCH	182
RESULTS AND DISCUSSION	191
CONCLUSIONS	212
CHAPTER 6: DISCUSSION	220
INTRODUCTION	220
SUMMARY AND DISCUSSION OF THE RESEARCH FINDINGS	221
STRENGTHS AND LIMITATIONS OF THE RESEARCH	229
IMPLICATIONS OF THE RESEARCH	233
<i>Implications for program design and associated research</i>	<i>233</i>
<i>Implications for participant assessment and associated research</i>	<i>238</i>
<i>Implications for leadership development practitioners and associated research</i>	<i>240</i>
CONCLUSIONS	241
REFERENCES	243
APPENDIX A: SURVEY QUESTIONS (STUDY 3)	270
APPENDIX B: INFORMATION SHEET FOR PARTICIPANTS	271
APPENDIX C: CONSENT FORM FOR PARTICIPANTS IN THE STUDY	275
APPENDIX D: INSTRUCTIONS FOR TEST ADMINISTRATION	277

List of Tables

Table 2.1: The Basic Propositions of Constructive-Developmental Theory	24
Table 2.2: Loevinger’s ego stages	29
Table 2.3: Stages of Consciousness Development	43
Table 2.4: Integrated Consciousness Stage Transition Phase Descriptions	67
Table 3.1: Loevinger’s Stages of Ego Development	92
Table 3.2: Distribution of Ego Stage at Program Entry	106
Table 3.3: Distribution of MBTI preferences and types and means and standard deviations for WUSCT item sum by preference/type on program entry and exit and education level	107
Table 3.4: Results of Chi-square analysis exploring the association between ego stage on program entry and the MBTI Sensing/Intuition preference.	110
Table 3.5: Results of Chi-square analysis exploring the association between ego stage increase on program exit, the MBTI Sensing/Intuition preference and gender.	112
Table 4.1: Stages of Consciousness Development	126
Table 4.2: Summary of additional psychosocial challenges included in enhanced CLPs	136
Table 4.3: Sample characteristics by group	141
Table 4.4: Participants’ mean consciousness stage at entry and exit and mean difference between the latter by group.....	146
Table 4.5: Percentage of participants advancing at least one consciousness stage on program exit	148
Table 4.6: Distribution of MBTI Sensing and Intuition preferences by group	149
Table 4.7: Consciousness stage increases by Sensing and Intuition preferences and group	151
Table 4.8: Consciousness stage increases by level on entry, Sensing and Intuition preferences and group	152
Table 5.1: Integrated Consciousness Stage Transition Phase Descriptions	176
Table 5.2: Consciousness stage on program exit by group.....	187
Table 5.3: Developmental changes: Group comparisons	198
Table 5.4: Program impact: Group comparisons	204
Table 5.5: Life challenges prior to and/or during the programs: Group comparisons	209
Table 5.6: Program timing: Group comparisons.....	210

Abstract

Loevinger's (Loevinger & Blasi, 1976; Loevinger, 1987) theory of consciousness development provides a stage model for understanding psychological growth through the lifespan. Many constructive developmental theorists have argued that resolution of the adaptive challenges now faced by organisations, communities and globally, requires leadership from people who have reached Loevinger's post-conventional stages of adult psychological development. As yet, there is little empirical evidence to explain why so few individuals attain these post-conventional stages, and whether or how such development may potentially be facilitated.

The research program presented in this dissertation aimed to help address this gap in the literature by furthering an understanding of factors influencing consciousness development, particularly to the first post-conventional level. It was undertaken in three stages, utilising a mixed methods approach, and resulting in production of three journal articles (one published, and two under review with international journals).

The first study explored whether personality preferences and combinations thereof (as measured by the Myers-Briggs Type Indicator or MBTI) are associated with higher consciousness levels (as measured by the Washington University Sentence Completion Test or WUSCT) and whether particular personality preferences might act as inhibiting or facilitating factors in consciousness development. Participants were 374 adults participating in Australian community leadership programs (CLPs) or professional management programs. After adjusting for age and education, a preference for Intuition was associated with significantly higher consciousness development on program entry and with greater consciousness development during the programs. These results provide support for Manners' and Durkin's (2000) proposal that dispositional personality characteristics may enhance or constrain consciousness development.

The second study involved 335 adults and explored the impact on consciousness development of participating in either standard or enhanced Australian CLPs (compared to control programs). Aligned with Manners' and Durkin's (2000) conceptual framework, CLPs offer experiences that are interpersonal, emotionally engaging, personally salient and structurally disequilibrating for later conventional consciousness stages. Enhanced CLPs include additional psychosocial challenges. Standard and enhanced CLPs were successful in facilitating consciousness development within the conventional stages. Enhanced CLPs were significantly more successful in triggering post-conventional development, and specifically among those participants who had a preference for MBTI Sensing.

The third study involved qualitative analysis of survey data from 84 individuals graduating from three enhanced CLPs. It found alignment with Loevinger's (Loevinger & Blasi, 1976; Loevinger, 1987) theory and Manners' and Durkin's (2000) conceptual framework in terms of the changes that participants who had shifted a stage of consciousness (Shifters) had noticed in themselves, and the aspects of the CLP they believed had been important in facilitating their development. Shifters were also significantly more likely than non-shifters to cite work changes and challenges when asked about other influences that may have impacted their readiness for development. Those with an MBTI Sensing preference were significantly more likely to report factors that were supportive of their development than those with an MBTI preference for Intuition.

Together, these studies contribute to a more sophisticated understanding of the factors that may facilitate or inhibit consciousness development (particularly to post-conventional stages). Implications for the design of, and selection of participants for, leadership programs to promote such development are discussed, and future research directions are indicated.

Declaration

I, Nicola Caroline Vincent, certify that this work contains no material which has been accepted for the award of any other degree or diploma in my name, in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text. In addition, I certify that no part of this work will, in the future, be used in a submission in my name, for any other degree or diploma in any university or other tertiary institution without the prior approval of the University of Adelaide and where applicable, any partner institution responsible for the joint-award of this degree.

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Nicola Caroline Vincent

Date: 9 July, 2014

Acknowledgements

I have been fascinated by psychological research for most of my adult life. All of the roles in my early career were in research, and I missed it a great deal when I eventually moved into senior executive roles that no longer required me to be involved in research in a hands-on way. Eventually, the call to undertake research again in an area that I find compelling because of its potential to impact not only the field in which I now work, but so much in else the world, drew me back to university and PhD study. As passionate as I am about this field of study however, I could not have imagined how arduous it would be to undertake a doctorate while also leading a dynamic, rapidly evolving and lean organisation - especially when added to the usual demands that having a large family entails (as well as the challenge of the life-threatening 2-year illness of one of my children along the way). I am exhilarated to finally be at the end of this long journey, and so grateful to those who have helped me to get to this point.

My husband Simon and I embarked on PhDs together (figuring our marriage would probably not survive one or other of us doing this alone whilst also holding down other significant roles). Throughout the journey we have been sounding boards for each other's ideas (mostly during regular walks in the bush together), acted as each other's reviewers, provided support and encouragement for each other during periods when the workload seemed overwhelming, and served as a continual source of competitive motivation for each other in the long-distance 'race' to get the dissertations finished! Simon, I want to thank you for all the emotional, physical and spiritual support you have given me throughout this process. I now look forward to the many other pursuits we can enjoy together during our free weekends!

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Chapter 1: Introduction to the program of research

Overview of the research and its significance

Although leadership has always been challenging, its complexity has intensified along with globalisation, major geo-political shifts, rapidly changing technologies, rising global inequality, growing evidence of the unsustainability of human use of planetary resources, climate change and the increasing expectation that individuals in positions of leadership must be accountable for the ethical issues arising from these challenges (Akrivou & Bradbury-Huang, 2011; McKenna, Rooney & Boal, 2009). Kegan (1994), a prominent adult constructive developmental theorist, has pointed out that we humans are ‘in over our heads’ with the adaptive challenges now faced by communities, organisations and families, because they demand much more than the acquisition of specific skills or knowledge – “They make demands on our minds, on how we know, on the complexity of our consciousness” (p. 5). It is for this reason that Kegan and Lahey (2009) argued that leadership development interventions should focus on supporting people to transform their current way of making sense of the world (shift their consciousness) so that they can take a broader perspective and increase their adaptive capacity.

Constructive developmental theories are concerned with how people make meaning of themselves and the world around them and how these constructions grow more complex over the lifespan as adults evolve through qualitatively distinct stages. Loevinger’s (Loevinger & Blasi, 1976; Loevinger, 1987) constructive developmental stage theory of ego development (now more commonly referred to as ‘consciousness development’) provides a framework for understanding this growth through the lifespan. According to this theory, as growth in consciousness proceeds there is increasing personal autonomy, greater flexibility, increased self-awareness, increased interpersonal awareness, increased capacity for reflection, greater

tolerance for ambiguity and difference, as well as a decline in defences (Cook-Greuter, 2004; Manners & Durkin, 2001). Much research has demonstrated that growth to higher levels of consciousness is associated with adaptive advantages in relationships (Zilbermann, 1984), parenting (Dayton, 1981), preventive healthcare (Gast, 1984; Michaelson, 1985), organisational development (Bushe & Gibbs, 1990; Guerette, 1986; Marrewijk & Were, 2003), career success (Vaillant and McCullough, 1987), protection against burnout (Lambie, 2007), adjustment to life changes (Bursik, 1991) and the development of complex sustainability change initiatives (Brown, 2011).

Since it makes intuitive sense that such growth may be linked to greater leadership capacity and skill, it is not surprising that adult constructive developmental theories have been used to inform leadership and executive development interventions for many years (Cook-Greuter, 2004; Kegan & Lahey, 2001; Laske, 1999, 2003; McAuliffe, 2006; Palus & Drath, 1995; Torbert et al., 2004). However, it is only since McCauley, Drath, Palus, O'Connor and Baker (2006) undertook an extensive critical review of the research literature and suggested that these theories can provide an integrative framework for the leadership field, that they have begun to infiltrate mainstream leadership and executive development literature more significantly. Since then, a growing body of academic research has shown associations between higher consciousness development and better leadership performance and organisational outcomes (Barker & Torbert, 2011; Bartone, Snook, Forsythe, Lewis & Bullis, 2007; Brown, 2011; Harris & Kuhnert, 2008; Helsing & Howell, 2013; Joiner & Josephs, 2007; Strang & Kuhnert, 2009). There are also increasing calls for, and interest in, the design of interventions to promote adult consciousness development in business schools and in the leadership/executive development arena (Akrivou & Bradbury-Huang, 2011; Akrivou & Bradbury-Huang, 2014; Drago-Severson & Blum-DeStefano, 2014; Ghosh, Haynes, & Kram,

2013; Joiner & Josephs, 2007; Kegan & Lahey, 2009; Valcea, Hamdani, Buckley & Novicevic, 2011).

In spite of this growing interest in interventions to promote consciousness development, empirical and evaluation research in this area remains almost as sparse as it was when McCauley et al. (2006) published their review. Manners and Durkin (2000) developed a conceptual framework that represented consciousness stage transition as restructuring of schemas in response to life experiences that are personally salient, interpersonal in nature, emotionally engaging and challenging, but which is mediated by the degree of exposure to such life experiences, along with dispositional personality traits that interact in complex ways to influence the likelihood of such exposure, and how the experiences are perceived and responded to. This framework has only been tested in a single study however (Manners, Durkin & Nesdale, 2004) and there remains very little evidence to support speculation about the factors that might foster growth in general, and at each of the different developmental stages, or about the individual 'readiness' factors that might facilitate or inhibit such development (Bartone et al., 2007; McCauley et al., 2006).

There is a particular lack of research into how movement to post-conventional levels of consciousness development (those beyond the norm of the general population) might be facilitated by training, developmental programs or coaching. Many authors have argued that the capacities that evolve at these levels will be required for tackling the complexity of our 21st Century challenges (Barker & Torbert, 2011; Cook-Greuter, 1999; Cook-Greuter, 2004; Cook-Greuter & Miller, 1994; Hewlett, 2004; Joiner & Josephs, 2007; Kegan & Lahey, 2009; Rooke & Torbert, 2005), but as McCauley et al. (2006) noted, post-conventional growth is not part of normal development so there are few social supports for it, and interventions designed to trigger growth at the conventional levels cannot be assumed to have the same effect at post-

conventional levels. Moreover, research on how people experience their own consciousness development and what they believe has been important in promoting this growth, is almost non-existent.

In summary, the growth of adult consciousness is associated with many adaptive advantages for the individual and society. However, although a sound conceptual framework has been put forward (Manners & Durkin, 2000), what is not yet clear is how such development occurs and what processes are involved – particularly in relation to post-conventional development.

The program of research presented in this dissertation provided a test for Manners' and Durkin's (2000) conceptual framework for consciousness development. In doing so, it aimed to inform the development of programs to assist in the promotion of consciousness development – particularly post-conventional development –while furthering an understanding of some of the individual readiness factors for such development.

Over the longer term, it is hoped that this research, and that of others to follow, will help promote the development of a critical mass of people in influential leadership roles to 'post-conventional' levels of consciousness in order to, as Donovan (1997) proposed, create a 'snowball' effect of higher level thinking that rolls throughout the institutions, systems and structures of our societies and eventually lifts everyone's capacity.

Australian community leadership programs

This research program was centred on people at both conventional and post-conventional levels of consciousness development who were participants in Australian community leadership programs (CLPs). CLPs are a particular class of leadership development program - similar to those run by the American Leadership Forum and the UK's Common Purpose. There

are currently around 18 such programs operating out of capital cities and regional centres around Australia with a combined total of more than 6000 graduates.

At the time of data collection, most Australian CLPs did not incorporate constructive developmental theory as an organising framework or deliberately set out to promote consciousness development. However, close observation revealed that most actually fitted Manners' and Durkin's (2000) framework for doing so quite well, in that they offered potentially disequilibrating experiences that were interpersonal in nature, emotionally engaging and challenging, as well as being personally salient for participants.

Most of the CLPs in Australia are run over 10 months from February to November with each typically including the equivalent of 2 to 3 full day sessions per month as well as multi-day retreats and field trips. All are currently run out of not-for-profit organisations established for this purpose, or by local civic chambers of commerce or 'committees for cities'. CLPs recruit established and emerging leaders from very diverse business, government and not-for-profit organisations. Selection of participants is similar across all Australian CLPs. It is a competitive process involving completion of a written application and participation in an interview to assess suitability for inclusion. Candidates must have demonstrated above-average leadership capacity and a commitment to their community. They must also be supported by their employers to undertake the program and be open to learning and committed to increasing their involvement in their community. Each program has a limit of between 24 and 40 participants (depending on available program resources and the size of the region in which the program operates).

Unlike other more mainstream leadership development programs in Australia, CLPs are uniquely focussed on facilitating their participants' exposure to major economic,

environmental, social and cultural issues affecting their communities – and (under the Chatham House Rule) to the leaders at the forefront of these issues from a diversity of perspectives, sectors and industries. CLPs generally involve highly interactive and experiential sessions, some in environments that participants might otherwise never encounter. For example, participants may, at various times throughout the program, find themselves serving meals in a homeless centre, working with people with disabilities to help place them in suitable work, in a prison talking to prisoners about their lives, sitting around a campfire with indigenous elders discussing the challenges facing such communities, walking the fields with a farmer, or observing a criminal trial. Additionally, participants may attend artistic performances, visit businesses and public infrastructure projects, and meet with state and federal politicians and visiting dignitaries. Experiential sessions are generally followed by group debriefing.

Experiential learning opportunities of this kind are likely to be disequilibrating for those at the conventional stages of consciousness development because the collaborative examination of complex and often ill-defined community issues from diverse perspectives (including the diversity of perspectives among the program participants themselves) will raise awareness that problems can be viewed through different lenses; that such issues cannot be considered in isolation – they must be viewed within the context of the larger multiplicity of systems with which they interact; that authority cannot be relied upon to provide answers; there are no simple solutions; and there can be different but equally valid ways to intervene (Heifetz, Grashow & Linsky, 2009; Taylor, 2006; Valcea et al., 2011). Ambiguous experiential challenges such as these also begin to expose participants to the fundamental paradoxes in human nature, simultaneously highlighting their own mental habits and biases.

In the program environment, away from their regular routines, roles and familiar circumstances, participants are more able to reflect deeply. Programs may thus operate as ‘holding environments’ – providing a psychologically safe place in which to reflect on the limitations of the current level of meaning-making, and a source of social support through the disturbance that this entails (Day, Harrison & Halpin, 2009; Kegan & Lahey, 2001; Merriam & Clark, 2006; Petriglieri & Petriglieri, 2010).

Some CLPs (which are referred throughout the thesis as enhanced CLPs) also provide one or more additional psychosocial components and challenges with the potential to further assist in the promotion of consciousness development, in as much as they involve further opportunities and support to self-reflect, learn from experience, work with diverse perspectives, experiment and take risks. These components can include psychological testing of participants (with associated feedback and development, integrated through the program), professional individual coaching, peer assessment and feedback, extended wilderness-based outward-bound experiences, case-in-point learning, personal case study work and/or community-focussed group projects. All can be described as aligning with Manners’ and Durkin’s (2000) framework for promoting conscious development in that they are interpersonal in nature, emotionally engaging and challenging, as well as being personally salient for participants. Table 4.2 in Chapter 4 provides examples of the additional program components included in enhanced CLPs.

Research program

Research questions

The program of research described in this dissertation was designed to further an understanding of how late-stage conventional and early post-conventional consciousness

might be developed. From this overarching aim, three quite distinct major research questions were composed after an exploratory review of the literature. These were as follows:

1. Are particular personality preferences and combinations thereof (as measured by the Myers-Briggs Type Indicator or MBTI) associated with higher consciousness levels, and might particular personality preferences act as inhibiting or facilitating factors in consciousness development?
2. Do Australian community leadership programs promote consciousness development - particularly to post-conventional levels?¹
3. What is the perspective of those who have recently shifted a stage of consciousness in relation to how they have changed and the nature and timing of experiences (within the program and/or in their broader lives) that they believe may have triggered such changes?

Research design

A mixed methods design was utilised for this program of research. Tashakkori and Creswell (2007) have defined mixed methods as "...research in which the investigator collects and analyses data, integrates the findings, and draws inferences using both qualitative and quantitative approaches or methods in a single study or program of inquiry." (p. 4). This choice was largely a pragmatic 'bottom-up' approach in which the research methods that seemed most appropriate and useful to address the research questions were selected (Johnson & Onwuegbuzie, 2004; Johnson, Onwuegbuzie & Turner, 2007; Morgan, 2007). Thus, the first two research questions were investigated in quantitative studies (both using a quasi-experimental design) and the third, with a qualitative study (the latter using a survey with open-ended

¹ An attempt was initially made to also explore whether there was a relationship between the level of consciousness of the leaders of the programs and the consciousness development promoted in the participants in their programs. Unfortunately however, fewer than half of the program leaders were prepared to be tested and thus there were not enough data with which to conduct any meaningful analyses.

questions, but also utilising simple statistical comparisons in responding to some particular sub-questions). This approach could be labelled as 'quantitative dominant' mixed methods research program (Johnson et al., 2007). It was intended not only to provide corroboration of findings across studies, but more importantly to provide a richer understanding of how late-stage conventional and early post-conventional consciousness might be developed than could be elicited from one or other method alone (Grbich, 2009; Johnson et al., 2007).

Researcher interests and actions undertaken to mitigate potential impacts

As a researcher, I am to some extent an insider, in that I am deeply involved in community leadership development. I graduated in 2001 from one of the community leadership programs subsequently recruited into this study, having found it to be a powerful transformational experience that shifted my thinking in many and diverse ways. Soon afterwards I began running a CLP and I am currently the CEO of a not-for-profit leadership institute facilitating and developing a CLP (and other leadership development programs). I have also served as the Chair of the national professional organisation for community leadership in Australia (commencing after the end of the data collection period for this PhD research program).

My passion for community leadership development has been fuelled by my anecdotal experience of the transformations that take place in CLP graduates. Over the years I have seen many CLP graduates make radical transformations in their personal lives, their communities and in their organisations as a result of participating in such programs. Time and again, graduates report 'seeing the world differently', being better able to reflect and take a 'balcony' perspective, to reframe and redefine problems, question assumptions, explore and integrate different points of view, inspire commitment and to better take care of their own wellbeing and that of their team and broader community.

I also have a deep interest in consciousness development. In 2006, I came across two powerful influences that converged to inform and guide my work from that point forward. The first was the adaptive leadership model of Harvard professors Ron Heifetz and Marty Linsky and the second was constructive developmental theory - and specifically the work of prominent constructive developmental theorists Loevinger, Kegan, Cook-Greuter and Torbert. Through my exploration of constructive developmental theories, I began to see how the capacity for recognising and responding effectively to adaptive leadership challenges might be related to the development of consciousness. It was at this point that the idea for the program of research for my PhD was born, and thus it is essential for me to acknowledge these important influences that underpin this program of research.

In addition, I have appreciated the simplicity, face validity, practical applicability and explanatory power of the Myers Briggs Type Indicator (MBTI) since I first encountered it in 2003. Two years later, I undertook the training to become accredited in the use of the tool (Step I and II) and have facilitated the MBTI sessions within all of the major programs and in in-house consultancies that my organisation has run since then. I have also run MBTI sessions for community leadership programs in other Australian states on a voluntary and occasional basis.

The subjectivity associated with the fact that I see all three of these things – community leadership, constructive developmental theory and the MBTI - as valid and useful in the world, could not be removed or avoided entirely during this research program. Although I believe I have remained open to having my assumptions challenged or falsified, I have also been mindful of the potential impact of my insider status and potential biases (i.e. the risk of allegiance effects) throughout this undertaking. Accordingly, the following actions were taken, in consultation with my PhD supervisors, in order to help mitigate this potential impact, and ensure the trustworthiness of the data analyses:

1. Although data from the CLP that is run by my organisation were included in the two quantitative studies undertaken as part of this program of research, this was only one among 11 CLPs from which data were collected for inclusion in the studies.
2. Two control programs were utilised in the study that explored the efficacy of CLPs in promoting consciousness development.
3. My organisation's program was excluded from the third (qualitative) study, and a survey method was utilised (rather than in-depth interviews) to reduce the possible impact of allegiance factors of both participants and myself on the data (Boyce & Neale, 2006).
4. In order to strengthen the validity of my qualitative comparisons between different groups within the third study, quantitative analysis was also undertaken.
5. Inter-rater reliability tests were carried out to validate my scoring of the WUSCT, and to assess the reliability of my coding of the qualitative data in the third study.

Materials and methods

Specific details of the materials and methods used for each study are included in the chapters (3-5) covering these studies. However, an overview is provided here for contextual purposes, as well as to provide some detail that was not included in the chapters.

Participants

A total of 374 participants were initially recruited for this study - 337 from 11 community leadership programs (CLPs) around Australia and 37 from two non-academic professional management programs. The latter participants, who acted as controls for the second study, completed a program which is run by the executive education unit of a university and offered in two Australian States. A summary of this program is included in Chapter 4.

Sample size was restricted by the number of programs prepared to participate in the research and the number of people within the latter who agreed to participate. Overall, 96% of the 390 participants in the 13 programs were tested at the commencement of their programs (n=374) and 90% of these (n=335) participated in the final testing session at the end of their program. However, attrition was not evenly spread, with participants in the control group having a much greater drop-out rate (48.6%) than participants recruited from CLPs (6.2%). A possible reason for the difference in attrition is that all CLPs scheduled the final testing session as part of a retreat at the end of the program, whereas there was no retreat for the control programs and these participants were asked to complete the final testing in their own time at the end of their last program seminar. No programs dropped out of the research.

Of the initial sample, 61% of participants came from programs located in the metropolitan regions of major cities, and the remainder from programs in regional Australia. Fifty percent were female. Age ranged from 18 - 61 with a mean age of 40 (SD = 7.78). All spoke fluent English, but for 6% this was not their first language. Four percent of the sample identified as Australian Aboriginal or Torres Strait Islander. The sample was highly educated, with 75% having completed a university degree, 26% having postgraduate qualifications at Masters or PhD level and only 6% not having completed high school. Their levels of consciousness ranged from Diplomat (1.9%), to Expert (15.2%), Achiever (67.4%), Individualist (13.9%) and Strategist (1.6%).

Measures

The Washington University Sentence Completion Test (WUSCT)

The Washington University Sentence Completion Test (WUSCT) has been described as the most extensively validated projective technique for assessing personality (Lilienfeld, Wood & Garb, 2000, p. 56). It was first published in 1970 (Loevinger & Wessler, 1970; Loevinger,

Wessler & Redmore, 1970) and revised in 1985 (Loevinger, 1985) and in 1996 (Hy & Loevinger, 1996). The most recent version of the test is Form 81. It served as the basis for the revised scoring manual published by Hy & Loevinger (1996).

The WUSCT has been used in hundreds of studies and administered to many thousands of people (Cohn & Westenberg, 2004). The premise of the test is that meaning is created and communicated through language and a person's choice of sentence content and structure models the way they see the world (Cook-Greuter, 1999). Respondents complete a series of 36 sentence stems selected for eliciting various aspects of consciousness development. Responses are scored using a detailed scoring manual (Hy & Loevinger, 1996) and combined using ogive rules to place the respondent in one of the eight stages of consciousness development. As Cook-Greuter's (1999) research challenged the adequacy of the latest revision of the manual for describing and adjudicating the post-conventional stages, Cook-Greuter's modified ogive rules were utilised in the current program of research, as they have higher cut-off numbers for assigning high-end consciousness scores (the Individualist stage and above) thus decreasing the likelihood that conventional protocols would be incorrectly labelled as post-conventional.

Test forms for men and women are identical apart from a change in personal pronoun to make stems personally relevant. The test can be split in half to produce two abbreviated versions. These alternate short forms were used for this program of research, to prevent the measurement error effects found in repeated use of the full test (Redmore & Waldman, 1975). Hy and Loevinger (1996) recommended the use of overall consciousness stage (a categorical measure) rather than item sum in research using the WUSCT. This recommendation was followed in the second study. In the first study, to allow the use of more powerful statistical techniques, both stage and item sum scores were analysed and reported as appropriate.

Research has provided substantial support for the reliability of the WUSCT (Loevinger, 1979; Manners & Durkin, 2001). High inter-rater reliability has consistently been found in studies involving a range of populations. Using the item sum score, Loevinger and Wessler (1970) reported a Cronbach's alpha of .91 and this has been supported in several subsequent studies (Manners & Durkin, 2001). High and significant correlations between the two split halves of the forms have been found, with a similar correlation between each half and the 36-item version (Novy & Francis, 1992; Novy, Blumentritt, Nelson & Gaa, 1997). Although the uniqueness of ego development theory and measurement have made it hard to find appropriate alternative measures with which to compare it for construct validity, those studies that have compared the WUSCT with other measures of personality development have found that it compared favourably (Manners and Durkin, 2001).

Because the WUSCT is a written projective test, it is obviously affected by the command of the English language of those completing it. For this reason, potential study participants were asked to volunteer only if they self-assessed as being highly competent in English.

The Myers Briggs Type Indicator (MBTI).

One of the most popular inventories used to measure personality constructs outside the realm of academic psychology is the Myers Briggs Type Indicator - or MBTI (Bayne, 2003; Capraro & Capraro, 2002; Rushton, Morgan, & Richard, 2007). In counselling, education and business contexts it has proved to be a useful tool for describing personality in lay terms, helping people understand the nature and value of individual differences, and thus enhancing teamwork (Lloyd, 2012; Pittenger, 2005). Although the MBTI is often treated with disdain by academic researchers who prefer the use of the Five Factor Model (FFM or 'Big Five'), remarkable convergence between the two approaches has been found (Furnham, Dissou,

Sloan & Chamorro-Premuzic, 2007; Lloyd, 2012). Thus Lloyd (2012) suggested that they could readily be harmonised.

The MBTI was selected in preference to the FFM for this program of research, because of its focus on the positive qualities of all preferences, because it is easy to use and comprehend (from a program participant perspective) and was already in standard use in some of the programs. In addition, as an accredited MBTI trainer, I was able to offer to administer the instrument as part of a 4-hour team-building workshop built around understanding the MBTI preferences. Because most CLPs operate on very limited budgets and the workshop was offered free of charge, this was an additional incentive for some programs to participate in the research. One of the control programs also took up the workshop option.

The MBTI differs from most other trait-based personality instruments in that the eight characteristics it defines do not vary in quantity. Rather, they are four pairs of dichotomous constructs that were specified or implied in Jung's (1921) theory of personality and describe opposite, but equally valid, ways in which people use their minds (Myers, Briggs, McCaulley, Quenk & Hammer, 2003). The first dichotomy indicates differences in the way people orient their energy – either directing it primarily to the external world of people and things (Extraversion - E) or primarily to their inner world thoughts and reflections (Introversion - I). The second indicates differences in the way people take in information and the kind of information they like and trust, with some preferring to take in information using their senses and focus on the present and what is real and tangible (Sensing – S) and others preferring to go beyond what is real or concrete and focus on the future – patterns, possibilities, meanings and connections (Intuition – N). The third dichotomy reflects differences in the way people make decisions, with those with a preference for Thinking (T) preferring to base decisions on impersonal, objective logic whereas those with a preference for Feeling (F) prefer a person-

centred, values-based process. The fourth indicates differences in orientation to the external world, with some having a preference for planning and organising (Judging – J) and others preferring spontaneity and flexibility (Perceiving – P).

The MBTI Self-Scorable Form M was utilised in this program of research. It is a self-report instrument where the respondent selects one of two options for each of 93 items to identify his or her preferences (and preference clarity scores) on the four dichotomies outlined above. A respondent is assigned one of 16 possible 'type' classifications based on their preferences.

A review of the psychometric properties of the MBTI and its reliability and validity was undertaken by Gardner and Martinko (1996) and they were found to be generally satisfactory. Capraro and Capraro's (2002) meta-analytic reliability study examined the variability of measurement error in multiple administrations of the MBTI. Although there was some variability, they reported strong internal consistency and test-retest reliability. Cronbach's Alpha was computed on more than 10,000 participants and results ranged from .74 (TF) to .84 (SN). They also found test-retest coefficients to be stable over time (ranging from 1 week to 2.5 year intervals). Myers et al. (2003) reported more recent data on the psychometric properties of Form M. They found the split-half reliabilities of continuous scores for numerous samples generally exceeded .91 for each scale and test-retest reliability correlations range from .83 to .94 for a 4 week period. Test-retest reliabilities of continuous scores were calculated for different ranges of the preference clarity and correlations ranged from .99 to .93 for each scale with high preference clarity but were much lower (from .22 to .46) for the lowest preference clarity scores.

In terms of criterion-related validity, support is provided by type distribution tables which reveal differing proportions of types across occupations that are consistent with type theory. In

addition, numerous studies have reported correlations between the scales of the MBTI and various personality, academic and interest matters (Gardner & Martinko, 1996; Myers et al., 2003). Although at the present time the key structural assumptions of type theory and the way in which the MBTI is assumed to operationalise them remain in dispute, to be consistent with type theory Myers et al. (2003) suggest using preference categories, combinations of preference categories and whole types as independent variables – which is how they were utilised in my first study. Based on the findings of the first study, the analyses in the second and third studies were restricted to the preferences for Sensing versus Intuition.

The Survey

Survey questions for the third study in this program of research, were inserted at the beginning of the general program evaluation survey for three community leadership programs (two based in Australian state capitals and one in a large regional centre). The three programs were selected for practical reasons - each had a large number of participants and routinely conducted a survey-based program evaluation for exiting graduates into which my questions could be easily inserted. The survey questions were designed to elicit information about (1) differences respondents had noticed in themselves and the way they were operating (both personally and professionally) since the program began; (2) whether they attributed any changes to specific design elements or components of the CLP; (3) the nature of any professional or personal challenges they had faced in the year before or during the program that may have influenced their readiness for development; and, (4) their views about the appropriateness of the timing of the program in their life. A copy of the full survey is included in Appendix A.

Procedure

This research program received ethical approval from the University of Adelaide Human Research Ethics Committee. Participants gave informed consent to take part in the research project (see Appendix B for participant information sheet and Appendix C for the consent form). They completed the WUSCT (first 18 stems) and MBTI on program entry. These data were collected from 9 of the 13 programs by the author. For the remaining 4 programs data were collected by the program leaders (each of whom was sent precise instructions for test administration – see Appendix D). Participants completed the WUSCT (second 18 stems) on program exit (this was at 10 months for 9 of the programs, with one program finishing at 24 months, one at 16 months and two at 12 months). The latter data were collected by the program leaders, again with precise instructions for test administration provided (again, see Appendix D). The survey questions were sent out via a web-based survey service immediately prior to the final program session. Survey responses from all participants were collated by the program leaders and sent to the author in electronic form.

Due to funding limitations, all WUSCT protocols were scored by a single trained scorer (the author). However, scoring of 67 of the protocols was checked by another expert scorer who had graduated from the extensive sentence completion test scoring certification course run by Cook-Greuter. The proportionate agreement on overall protocol ego level was 93%, with a difference of one ego stage between scorers in only 7% of the protocols ($Kappa = 0.79, p < .0005$).

Test and survey responses were kept strictly confidential. Participants were assigned a unique identification number that they used in completing all instruments and information about participants' identity was not stored with the data from the completed instruments. The list connecting participants' names and their code number is kept in a locked filing cabinet

separate from the data and will be destroyed once all the data from this and any possible follow-up studies have been collected and analysed (a maximum of 7 years). Those participants who took part in the survey (study 3) were given a pseudonym that was used in preparing the publication and dissertation chapter (Chapter 5) based on this study.

Participants were provided with a brief report of their personal WUSCT and MBTI results and a report of the outcomes of the research will be made available to them. Program leaders were provided the pooled results for their particular program and will also be provided with a summary report of the outcomes of the research.

Comment on terminology

Although 'ego development' was the term coined by Loevinger (Loevinger & Blasi, 1976) to describe the process of human consciousness development in her model, and this term is still utilised by many in the field of adult development, the more generic terms 'consciousness development' or 'constructive development theory' are often used in the academic management and leadership literature to cover both Loevinger's and Kegan's (1982; 1994) models. Throughout this dissertation, the term 'constructive developmental' has been generally used to refer to both models, and the term 'consciousness development' has been generally used to refer to the process of development associated with these models, often even when referring specifically to Loevinger's work (except in the section where Loevinger's model is initially introduced). However, the term 'ego development' has been utilised in Chapter 3, because this chapter presents a manuscript published in an adult development journal that prefers the latter term.

In a similar vein, once they have been introduced, Torbert's et al. (2004) modified labels given to the stages in Loevinger's model, and their modified stage descriptions, have been

generally used throughout this dissertation for consistency – even when referring to the stages in Kegan’s model. Torbert’s labels are more descriptive and less evaluative and abstract than Loevinger’s original labels and they are also more commonly used in the leadership and management literature. The exception to this is in Chapter 3 however, where Loevinger’s original stage names are utilised in the manuscript – again because this was the preference of the journal.

Overview of the thesis

The second chapter of this dissertation presents a review of the literature, focussing on Loevinger’s (Loevinger & Blasi, 1976; Loevinger, 1987) constructive developmental theory of ego development, the modifications and extensions of this undertaken by Cook-Greuter (1999) and Torbert et al. (2004), and an overview of Kegan’s (1982; 1994) theory. The chapter also covers arguments about the limitations of conventional consciousness, the relationship between consciousness development and leadership and the literature on the promotion of consciousness development, with a particular focus on the conceptual framework developed to describe the latter by Manners and Durkin (2000). It also covers individual trait, state and environmental factors that potentially facilitate or inhibit such development.

The following three chapters (Chapters 3-5) comprise the three studies undertaken for this research program. Each study was written up as a journal article and of these, the first (Chapter 3) has been published, the second (Chapter 4) has been revised and re-submitted for publication after initial peer review, and the third (Chapter 5) has been submitted to an international journal and is currently under review. The manuscripts have been presented in the chapters in their original form, although their section labels and table numbering have been changed to align with the rest of the dissertation, and the reference lists have been removed and combined into one list at the end of the thesis.

Chapter 3 comprises the first of the three studies, and explored the first research question – namely, whether particular personality preferences and combinations thereof (as measured by the MBTI) are associated with higher consciousness levels (as measured by the WUSCT) and whether particular personality preferences might act as inhibiting or facilitating factors in consciousness development. A total of 374 participants were recruited for this study - 337 from 11 community leadership programs (CLPs) around Australia and 37 from two non-academic (but university-run) professional management programs.

Chapter 4 comprises the second study undertaken. It investigated the second research question – namely, whether Australian community leadership programs promote consciousness development, particularly to post-conventional levels. It explored the impact on consciousness development of participating in either standard or enhanced CLPs in Australia and compared this impact with that of participating in a control program. There were 80 participants in the 4 programs that comprised the standard CLP group, 237 in the 7 programs that comprised the enhanced CLP group and 19 in the two programs that comprised the control group.

Chapter 5 comprises the third and final study. It investigated the third research question – namely, what is the perspective of those who have recently shifted a stage of consciousness in relation to how they have changed and the nature and timing of experiences (within the program and/or in their broader lives) that they believe may have triggered such changes? To do so, it explored the experience of development from the perspectives of 28 individuals who had recently shifted (and an additional 13 who had come close to shifting) a stage of consciousness during the course of participation in one of three enhanced CLPs, and compared these perspectives to the responses of 43 individuals who had not shifted or come close to shifting. The aim was to further an understanding of how some trait, state and environmental

factors may mediate readiness for consciousness development – in particular, work and other life challenges experienced immediately prior to or during the course of the program, age-related timing factors and MBTI Sensing and Intuitive personality preferences. In addition, this study examined whether or not the changes these individuals reported noticing in themselves aligned with Loevinger’s theory of consciousness development, and whether or not their descriptions of the programs’ impact aligned with Manners’ and Durkin’s (2000) framework for the design of interventions to promote consciousness development.

In the final Chapter (Chapter 6) the findings of each of the studies are integrated and their implications for theory, practice and future research directions are discussed.

Chapter 2: Literature review

Introduction and overview of the chapter

According to Kegan (1994), constructive developmental theory brings together two influential lines of discourse in psychology and other areas of Western intellectual life. These are 'constructivism' - the idea that individuals constitute or construct reality rather than somehow coming upon it - and 'developmentalism' - the idea that people "...evolve through qualitatively different eras of increasing complexity according to regular principles of stability and change" (p.199). Constructive developmental theories deal with the growing complexity of an individual's ways of constructing meaning about themselves and the world over time.

Kegan (1980) considered Piaget's (1958) pioneering research studies on the stages of cognitive development in childhood to be the most influential precursor to constructive developmental theory. For Piaget, development was a process of moving through qualitatively distinct stages of reasoning in which knowledge is transformed, rather than a gradual accumulation of new knowledge (McCauley et al, 2006). This idea remains central to constructive developmental theories, however Kegan (1980) referred to the latter as 'neo-Piagetian' because they move beyond the study of children and adolescents to include adults, and beyond the study of cognition to include emotions. In addition, Kegan (1980) argued that they move beyond the study of stages of development to include the processes of development and the role of the social context. The basic propositions of constructive developmental theory, as outlined by Cook-Greuter (2004) and modified by McCauley et al. (2006) have been reproduced in Table 2.1.

McCauley et al. (2006) noted that constructive developmental theories sit within a large and diverse literature on life span development. Within this literature, adult constructive

developmental theories can be distinguished from adult phasic developmental theories. The latter frame development and differentiate among individuals according to an individual's response to common life tasks and challenges that present themselves at particular periods of life or within specific age ranges (for example, marriage, parenting, menopause or retirement) or life crises (such as physical or mental illness, abuse, addiction, divorce or natural disasters). In contrast, adult constructive developmental theories view development in terms of how individuals structure reality and make meaning out of it and do not focus on specific age periods, phases in the life course or life tasks and challenges (Hewlett, 2004). Nevertheless, meaning-making may be influenced by an individual's response to life tasks and challenges – thus the two types of theories are not mutually exclusive.

Table 2.1: The Basic Propositions of Constructive-Developmental Theory

1	People actively construct ways of making sense of themselves and the world (as opposed to "taking in" an objective world).
2	There are identifiable patterns of meaning making that people share in common with one another; these are variously referred to as stages, orders of consciousness, ways of knowing, levels of development, organising principles or orders of development.
3	Stages of development unfold in a specific invariant sequence, with each successive order transcending and including the previous order.
4	In general, people do not regress: once a stage of development has been constructed, the previous stage loses its organising function, but remains as a perspective that can now be reflected upon.
5	Because subsequent stages include all earlier stages as special cases, later stages are more complex (they support more comprehensive understanding) than earlier stages; later stages are not better in any absolute sense.
6	Developmental movement from one stage to the next is driven by limitations in the current way of constructing meaning; this can happen when a person faces increased complexity in the environment that requires a more complex way of understanding themselves and the world.
7	People's stage of development influences what they notice or can become aware of, and therefore, what they can describe, reflect on, and change (Cook-Greuter, 2004).

NOTE: Adapted from "The use of constructive-developmental theory to advance the understanding of leadership" by C.D. McCauley et al., 2006, *The Leadership Quarterly*, p. 636 Copyright 2006 by Elsevier Inc. Adapted with permission.

Constructive developmental theories have been contested from within the broader literature on life-span development (McCauley et al., 2006). Some for example, have argued that they may be elitist and class biased (Broughton and Zahaykevich, 1988; Snarey, 1985) and others have argued that stage models ignore the richness and variation in human nature and thus "...reduce people to one-dimensional stereotypes" (Fischer & Bidell, 2006, p. 390). In spite of these critiques, there is general support for the existence of important patterns of qualitative shifts in the ways adults develop, such that earlier, more concrete and undifferentiated ways in which meaning is constructed are integrated into more complex, dynamic and comprehensive later ways (Berg & Sternberg, 2003; McCauley et al., 2006). In addition, reviews in recent years have continued to show that constructive developmental theory is valid and useful in providing a way of understanding how people are likely to interpret experience and thus how they are likely to act in various situations (Manners & Durkin, 2001; Demick & Andreoletti, 2003; Cook-Greuter, 2004).

Various constructive developmental models have been formulated to study different aspects of adult development, including Perry's (1968) 'scheme' of ethical and intellectual development in the college years, Kohlberg's (1984) and Gilligan's (1982) models of moral development, Basseches' (1988) concept of dialectical thinking and the model of the development of 'self, voice, and mind' developed by Belenky, Clinchy, Goldberger, and Tarule (1986). However, it is Loevinger's (Loevinger & Blasi, 1976; Loevinger, 1987) comprehensive framework of ego development (particularly as it was further developed by Cook-Greuter (1999, 2004) and Torbert (1987, 1991, 2004)) as well as Kegan's (1982, 1994) model of the evolving self, that have been most influential in the literature linking adult development and leadership development, as well as in informing leadership and executive development

interventions (Cook-Greuter, 2004; Kegan & Lahey, 2001; Laske, 1999, 2003; McAuliffe, 2006; Palus & Drath, 1995; Torbert et al., 2004).

Whilst both these models have informed the program of research presented in this dissertation, the primary emphasis has been on the work of Loevinger, Cook-Greuter and Torbert. The reasons for this are three-fold: Firstly, extensive critical reviews of Loevinger's model and its measurement tool - the Washington University Sentence Completion Test (WUSCT) – have found that there is substantial empirical support for the construct and discriminant validity of both the model and the WUSCT (Hauser, 1976; Loevinger, 1979; Manners & Durkin, 2001). In addition, the WUSCT is less time consuming to complete and score than the instrument based on Kegan's work (the Subject-Object Interview) and thus, is more suitable for use with large samples such as included in the current program of research. Thirdly, as has been noted by McCauley et al. (2006), in spite of the interest in using Kegan's framework to inform the design of interventions to promote consciousness development, to date there has been no research that has tested whether such designs are effective. In contrast, there is a small body of research that has tested interventions informed by the Loevinger/Cook-Greuter/Torbert framework, and this presented a base from which to more readily build the program of research in this dissertation.

It is for these reasons, that Loevinger's model will be introduced first in the current chapter, along with a summary of research covering its validity. Kegan's model will then be introduced by way of the critique to that of Loevinger's offered by Kegan, Lahey and Souvaine (1998), and the major differences and similarities between the two will be briefly summarised. Following this, Cook-Greuter's (1999) and Torbert's et al. (2004) adaptations to Loevinger's model will be described and the literature relating consciousness development to leadership

capacity will be reviewed. Models of the process of consciousness development will then be outlined, followed by a review of the research (and other) literature related to these models.

Loevinger's theory of ego development

Loevinger's (Loevinger & Blasi, 1976; Loevinger, 1987) theory of ego development has been described as one of the most comprehensive constructs in the field of developmental psychology (Westenberg & Block, 1993). Manners and Durkin (2001) noted that hundreds of studies have been conducted that have been concerned with various aspects of ego development and thus an extensive body of work has accumulated that has not only validated the theory, but allowed it to be extended and refined.

Like other constructive developmental models, Loevinger's work provides a framework for understanding the growth in an individual's way of constructing meaning through the lifespan which is comprised of an invariant sequence of stages in which higher stages represent greater and greater complexity, cognitive differentiation and integration (Cook-Greuter, 1999). Importantly, as Cook-Greuter (1999) noted "...A higher stage does not merely contain a more complex matrix of the content and structure of the prior stage, but transforms the previous way of looking at reality and offers a broader or deeper, more integrated perspective." (p29).

Loevinger (Loevinger & Blasi, 1976; Loevinger, 1987) conceived of the ego as a holistic personality construct that represents the frameworks of meaning which an individual imposes on experience (Hauser, 1976). Rejecting links with psychoanalytic conceptions of the ego, Loevinger (1983) declared that what she refers to as the 'ego' could not, and need not, be precisely defined – only pointed to. Nevertheless, she described it as second only to intelligence as the basis for major individual differences, regardless of what a psychologist sets out to measure (Hy & Loevinger, 1996).

Loevinger described four domains as inextricably interwoven aspects of the ego – character development, cognitive style, interpersonal style and conscious preoccupations (Loevinger & Blasi, 1976; Loevinger, 1987). ‘Cognitive style’ represents the level of cognitive development and conceptual complexity. It includes facets such as tolerance for ambiguity and tendency toward objectivity. ‘Interpersonal style’ refers to the person’s attitude towards others, the preferred type of relationship and the understanding of relationships. It includes facets such as independence, manipulateness, the need to belong and autonomy. ‘Character development’ incorporates impulse control as well as moral development as the basis for moral concerns and behaviour. ‘Conscious preoccupations’ are the main foci of the individual’s conscious thoughts and behaviours - including conformity, responsibility and independence (Blasi, 1998; Manners & Durkin, 2001). Loevinger conceptualised the developing ego in terms of the development of complexity in each of these four domains. Table 2.2 outlines how each of these domains manifests in each of Loevinger’s stages.

As Cook-Greuter (2004) and Manners and Durkin (2001) have noted, each of Loevinger’s stages (Loevinger & Blasi, 1976) represents a restructuring of the self-system towards greater self-awareness and interpersonal awareness, decreasing defensiveness, cognitive complexity, flexibility, reflective capacity, personal autonomy and responsibility (ego-centric to socio-centric to world-centric) as well as greater tolerance for difference and ambiguity. However, unlike Kegan’s (1982, 1994), Loevinger’s is not a true structural stage theory in that the stages are a mixture of structure and content (Manners & Durkin, 2001). Although Loevinger’s stage development represents an underlying progressive restructuring of the way in which the domains of character development, cognitive style and interpersonal style are understood, the nature of the conscious concerns change with each stage and so this domain is more content-

Table 2.2: Loevinger's ego stages

STAGE	IMPULSE CONTROL, CHARACTER DEVELOPMENT	INTERPERSONAL STYLE	CONSCIOUS PREOCCUPATION	COGNITIVE COMPLEXITY
Impulsive	Impulsive, fear of retaliation	Receiving, dependent, exploitative	Bodily feelings, especially sexual	Stereotyping, conceptual confusion
Self-Protective	Fear of being caught, externalising blame, opportunistic	Wary, manipulative, exploitative	Self-protection, trouble, wishes, things, advantage, control	
Conformist	Conforming to external rules, shame, guilt for breaking rules	Belonging, superficial niceness	Appearance, social acceptability, banal feelings, behaviour	Conceptual simplicity, stereotypes, clichés
Self-Aware	Differentiation of norms, goals	Aware of self in relation to group, helping	Adjustment problems, reasons, opportunities (vague)	Multiplicity
Conscientious	Self-evaluated standards, self-criticism, guilt for consequences, long-term goals and ideals	Inventive, responsible, mutual, concern for communication	Differentiated feelings, motives for behaviour, self-respect, achievements, traits, expression	Conceptual complexity, ideas of patterning
Individualistic	<i>Add:</i> Respect for individuality	<i>Add:</i> Dependence as an emotional problem	<i>Add:</i> Development, social problems, differentiation of inner life from outer	<i>Add:</i> Distinction of process and outcome
Autonomous	<i>Add:</i> Coping with conflicting inner needs, toleration	<i>Add:</i> Respect for autonomy, interdependence	Vividly conveyed feelings, integration of psychological causation of behaviour, role conception, self-fulfilment, self in social context	Increased conceptual complexity, complex patterns, toleration of ambiguity, broad scope, objectivity
Integrated	<i>Add:</i> Reconciling inner conflicts, renunciation of unattainable	<i>Add:</i> Cherishing of individuality	<i>Add:</i> Identity	

NOTE: "Add" means in addition to the description applying to the previous level. From *Ego Development: Conceptions and Theories*, (p. 24-25) by J. Loevinger and A. Blasi, 1976, San Francisco: Jossey-Bass. Copyright 1976 by Jossey-Bass.

related (although the changes are partly a function of the structural changes in the other three domains) (Manners & Durkin, 2001). This has troubled some - for example, Broughton and Zahaykevich (1988), Snarey, Kohlberg and Noam (1983) and Kegan, Lahey and Souvaine (1998) - who argued that the theory lacked a logic underlying each stage and guiding the developmental sequence. However, it did not disturb Loevinger, who declared that this was at least partly ineffable as “humans are marvellously various in their ways” (Loevinger, 1983, p348). Nevertheless, Cook-Greuter (1999) addressed this concern in her revisions to the theory (see below).

Loevinger’s theory (Loevinger & Blasi, 1976; Loevinger, 1987) brought together two prominent fields of research in psychology – developmental and personality (Hewlett, 2004). Since then, Loevinger and others who have taken a developmental approach to personality, viewing it as evolving over time in response to the environment, have often been locked in intellectual battles with those who conceptualise personality differences as innate dispositions that are stable across time - the latter often being referred to as the ‘trait approach’ and which is largely based on the Five Factor Model (FFM) or ‘Big Five’ (Costa & McCrae, 1985; 1992, 1998; McCrae & Costa, 1989; 2003). However, Kurtz and Tiegreen (2005) and Wilber (2000) have argued that although these two traditions are often viewed as incompatible approaches to understanding human individuality, this need not be the case. It makes sense that differences between people at the same stage of ego development might be explained by differing dispositional personality factors (amongst other things) and vice versa. As Manners and Durkin (2000) have noted, it also makes sense that dispositional personality characteristics may enhance or constrain ego development. The latter will be explored further in the section on personality traits and consciousness development below.

The evolution of Loevinger's theory was integrally linked to the development of the instrument used to measure the stages - the Washington University Sentence Completion Test (WUSCT) described in Chapter 1. An important distinction between the work of Loevinger and other constructive developmental theorists such as Kegan (1982, 1994) is that for Loevinger, the concept of the ego and ego development were derived from empirical data in the form of responses to sentence stems, rather than from theoretical predispositions (Manners & Durkin, 2001) – with the process of test construction simultaneously a process of correcting the details of the conception of the stages in the model (Loevinger, 1983). The WUSCT has undergone many revisions, has been used in more than 300 studies and administered to more than 11,000 people and is widely regarded as one of the most sound measures of personality development (Cohn & Westenberg, 2004).

The validity of Loevinger's constructive development theory and its measurement

There have been three substantial critical reviews of Loevinger's theory carried out by Hauser (1976), Loevinger (1979) and Manners and Durkin (2001). These reviews weighed up the evidence from a very large body of research that has been undertaken in relation to the theory and, as noted previously, concluded that there was substantial empirical support for the construct and discriminant validity of the theory and its measurement tool (the WUSCT). Since the review by Manners and Durkin (2001) took account of the earlier reviews, but focussed on the considerable body of research that had been undertaken in the 20 years since the last of these had been conducted, only the findings of this most recent review and the relevant studies conducted subsequently will be summarised.

Construct validity

In relation to construct validity, Manners and Durkin (2001) found that the three central tenets of the theory – the unitary nature of the ego, the ego representing an integration of cognitive functioning, personal and interpersonal awareness and character development, and the sequence of the ego stages – were all supported in numerous studies, as was the sequentiality of the stages. However, they did find evidence that individuals can experience stage regression. Although the uniqueness of Loevinger's theory and measurement made it hard to find appropriate alternative measures with which to compare it, those studies that have compared the WUSCT with other measures of personality development have found that it compared favourably (Manners and Durkin, 2001).

Predictive validity

Although Loevinger (Loevinger & Wessler, 1970) did not expect a clear predictive relationship between consciousness stage and behaviour, various studies have demonstrated ways in which stage of development predicted helping behaviours as well as conformity, responsibility and consistency in contraceptive use (Manners & Durkin, 2001). However Manners and Durkin (2001) noted that further research was required before predictive validity of the theory could be said to have substantial support. Since then, Cohn and Westenberg (2004) identified 16 studies that evaluated the relationship between consciousness level and behavioural or psychological variables (after controlling for intelligence). The consciousness levels represented in these studies did not extend beyond the Conscientious level. They found support for the prediction that impulse control should be weakest at the pre-conformist stages and increases in strength as individuals progress through to the conscientious stage, as well as for the prediction that advances in consciousness level are associated with an increasing capacity for perspective-taking (reflected in tolerance, nurturing parenting and volunteering). Furthermore, they found support for the prediction that consciousness development is

associated with changes in conscious preoccupations; shame, fearfulness of physical danger and fearfulness of negative social evaluation were negatively related to consciousness level, and achievement of a personal identity was positively related (Cohn & Westenberg, 2004).

Many studies have found a positive relationship between leadership capacity and consciousness development, thus also providing support for the validity of Loevinger's (as well as Kegan's) theory. This research will be discussed in a separate section later in this chapter.

Discriminant validity

Intelligence and verbal fluency

A relationship has been repeatedly found between consciousness development and measures of intelligence and verbal fluency, although most studies have found low to moderate positive correlations and thus Manners and Durkin (2001) concluded that they were distinct variables. Loevinger (Loevinger & Blasi, 1976) argued that cognitive development is necessary but not sufficient for consciousness development – the former providing the extent of the range of 'possibilities' for consciousness development.

More recently, Cohn and Westenberg (2004) undertook a meta-analysis of 52 correlations between consciousness level scores and intelligence test scores. These were retrieved from 42 studies involving 5648 participants. They found an estimated correlation between consciousness level and intelligence that ranged from .20 to .34 depending on the intellectual ability tested, and concluded that this is evidence of the discriminant validity of consciousness development over intelligence. Interestingly, the correlations varied according to the consciousness stages included in the samples, with those samples at the conformist level or lower having a higher correlation between consciousness level and intelligence than the samples with a mean consciousness level higher than the conformist stage. This latter finding

provided tentative support for the proposal by Hauser (1976) that there may be an asymmetric relationship between intelligence and consciousness level, with a wide range of intelligence scores present among those at the lowest levels of consciousness development and a restricted range of above average to high among those at later development stages. However, the authors noted that their available data were limited, and did not include consciousness stages above the Conscientious level (Cohn & Westenberg, 2004).

Cohn and Westenberg (2004) found further evidence of the discriminant validity of consciousness development in their analysis of 16 studies that examined the incremental validity of consciousness level scores after controlling for the effects of intelligence. Of these, 94% reported a significant relationship between consciousness level and the various criterion variables (such as aggression, conformity, openness to experience and breast-feeding) after removing the influence of intelligence, although the effect size varied depending on the criterion variable.

Cohn and Westenberg (2004) also found 23 correlations between consciousness level and verbosity or word count from 18 studies involving 2721 participants. The weighted average correlation was .54, but there was significant heterogeneity in the sample effect sizes, indicating that one or more moderator variables may be present. The authors argued that this moderately high correlation did not indicate that the WUSCT is a proxy measure of verbosity, because they also identified five studies that examined the incremental validity of consciousness level scores after controlling for the effects of verbosity. Each study reported a significant relationship between consciousness level and the criterion variable after controlling for verbosity.

Socioeconomic status (SES) and education

Manners and Durkin (2001) considered a number of studies that had investigated the relationship between consciousness development and SES in their review. Although they concluded that consciousness development was distinct from socio-economic status, it seemed that this depended on how SES was measured. In one study they cited (Snarey & Lydens, 1990) it was found that consciousness development was related to work complexity in one sample, but to occupation and education in two others. Another study (Browning, 1987) found that SES, as measured by respondent and parental education and fathers occupation, was linked to consciousness development only in those under 18. In those over 18, the respondents own education level accounted for twice the variance (8%) in consciousness development than in younger people, and parental factors did not contribute any additional information.

Cohn (1998) noted that there is typically a high correlation between education and consciousness development in school samples, but only a low to moderate correlation in adult samples. Miller (1994) reported on a study of 40 highly educated males (almost 2/3 had advanced academic or professional degrees and the remainder had attended college) between the ages of 28-57. He found only 5 scored at a post-conventional level of consciousness development and noted that this result provided evidence that higher levels of education and professional training do not guarantee movement into the post-conventional tier. At a ten-year follow up, he reported that WUSCT scores had remained relatively stable. More recently however, Truluck and Courtenay (2002) found a significant positive relationship between educational level and consciousness development in a sample of older adults aged 55 and over, with a higher percentage of college graduates and postgraduates having reached the Individualist (first post-conventional) stage of consciousness. They concluded that educational attainment may be related to consciousness development well into older adulthood.

The relationship between ego development, age and gender

Cohn (1998) conducted a meta-analysis of 92 studies involving over 12,000 participants from a wide range of samples that had used the WUSCT to measure consciousness development. He was interested in understanding when most people cease to mature in consciousness development terms. He found correlations of .40 between age and consciousness level in adolescent samples from cross-sectional and longitudinal studies, .13 in college-age adults in longitudinal studies and .04 in cross-sectional studies of adults. Cook-Greuter's (1999) research on people at the post-autonomous stages (n=60) found 5% of post-autonomous people were younger than 25 (all of them were female teenagers), 18% aged between 26 and 35, 45% between 36 and 45, 18% between 46 and 55, none aged 56-65, and 5% older than age 66. It is clear from these findings, that, although the majority of those at the post-autonomous stages were in mid-life at the time they were studied, younger people can certainly reach the post-autonomous stages. Also, since Cook-Greuter's study was cross-sectional, it does not tell us when those who measured at the post-autonomous stages in mid-life actually reached these stages. It is, of course, possible that some of these people may have achieved higher stage development at a much younger age than they were at the time of measurement. These findings, and more recent research reported by Truluck and Courtenay (2002) and Cook-Greuter (2004), support the hypothesis of Loevinger, Cohn, Bonneville, Redmore, Streich and Sargent (1985) that consciousness level stabilises for most individuals by early adulthood.

Cohn (1991) conducted a meta-analysis of 65 studies (involving more than 9,000 participants) to investigate gender differences in ego development. Moderately large differences were found among junior and senior high school students, with females having the advantage. This advantage declined significantly however, among college-age adults and disappeared entirely among older men and women. More recent studies have shown findings

that are consistent with those of Cohn's; for example, Mabry (1993) and Westenberg and Block (1993) found young female college students scored higher in ego development than their male counterparts, but Truluck and Courtenay (2002) found no gender differences in ego stage in their sample of 159 older adults (aged from 55 to over 75 years).

Major differences between Loevinger's and Kegan's constructive developmental models

Like Loevinger's model, Kegan's (1982; 1994) constructive developmental model has at its core, a 'self-system' with its primary function being to make meaning of experience and which gradually becomes more complex throughout development. However, unlike Loevinger's, Kegan's model was initially theory-driven – although it was later grounded in data from the psychometric instrument – the Subject-Object-Interview (SOI) – Kegan developed to assess an individual's stage of development.

Through the postulation of the 'subject-object relationship' in his model, Kegan (1982) set out to elucidate the general underlying principle for the stages and the development between them - something he and others such as Snarey et al. (1983) believed Loevinger had not done well enough (Kegan et al, 1998). The latter organises how an individual makes sense of cognitive, interpersonal, and intrapersonal experience differently at each of the five stages he describes, evolving gradually from simplicity to complexity in the cognitive realm, from self-focus to other focus in the interpersonal realm, and from an understanding of self that is externally defined to an internally defined self-understanding in the intrapersonal realm (Eigel & Kuhnert, 2005). Development is essentially a process of adaptation, involving that which was the subject of one stage (i.e. those aspects of the self from which an individual is unable to separate, and therefore, has no awareness of) becoming the object (i.e. the aspects of the self that one has separated from and can therefore take a perspective on and have some control

over) of the next. Kegan's stages are thus described in terms of what is 'subject' and object' at each level of development (McCauley et al., 2006).

Kegan's (1982) model also includes as an underlying principle, the lifelong tension between the yearning for inclusion and connectedness on the one hand and the yearning for differentiation and autonomy on the other. With each stage in the model, this tension is temporarily resolved back and forth in favour of autonomy at one stage, inclusion at the next (and so on). There is thus, a tension in each resolution - a kind of imbalance that makes the individual vulnerable to being tipped into the transition to the next stage. It is this tension, Kegan (1982) argues, that suggests a way of better understanding our vulnerability to growth at each level.

Kegan's approach to data collection through the SOI, is more cumbersome than the WUSCT because it involves a lengthy (1 hour) interview with each participant, and thus working with a great deal more data. As mentioned previously, this makes it much less suitable for research purposes and, as a result, studies utilising the tool have often been restricted to very small sample sizes (Bartone et al., 2007). Kegan et al. (1998) argued however, that the SOI is superior to the WUSCT because it not only allows the assessment of stage of consciousness, it also permits the researcher to observe the mental structure of a stage of development at work and for this to be described more precisely. Helsing and Howell (2013) supported this argument, observing that the richness of the qualitative data generated from the SOI provides a larger and more nuanced picture of how an individual is constructing meaning, whereas a developmental score (such as provided by the WUSCT) can lead to a stereotyped projection on individuals. This is certainly something to be cautious about, particularly when utilising the WUSCT (or its newer variants) for individual assessment in coaching settings, as many are doing these days. Loevinger (1979) herself noted that the WUSCT is "...adequately validated for

research use but neither so valid nor so reliable that it can be used as a clinical instrument without confirming data" (p. 308). The SOI may be a more powerful tool for use in the latter circumstances, and in qualitative research with small sample sizes. An understanding of both Loevinger's and Kegan's models can also help mitigate the potential for stereotyping around stages of development when utilising the WUSCT.

The SOI also addresses another important distinction between Kegan's model (1982; 1994) and that of Loevinger (Loevinger & Blasi, 1976; Loevinger, 1987) – the transition steps between stages. Kegan (1982) argued that it is too easy to view the stages in their 'seductive clarity' and forget that the person does not jump neatly from stage to stage. For Kegan (1982) the stages are "...tenuous, fragile, precarious states...chaos and a state of siege hang around the corner" (p. 114). Thus, using the SOI, four transition steps between each stage can be measured. There are no transition steps articulated in Loevinger's most recent version of the model (Hy & Loevinger, 1996, p. 4), although some were present in earlier models. However, Loevinger recognised this as an issue, noting that it had "...proved impossible to show by research that some configurations called stages are in any demonstrable way different from patterns that have been called transitions between stages." (Hy & Loevinger, 1996, p. 4). Table 2.3 displays the stages in Kegan's model.

Cook-Greuter's revisions and extensions to Loevinger's theory

Cook-Greuter (1999), a student of both Loevinger and Kegan, was frustrated by the limits of Loevinger's theory in accounting for higher-stage development and the difficulties encountered when attempting to score WUSCT protocols at the highest end of the developmental scheme with the revised version of the manual (Hy & Loevinger, 1996). In addition, she was concerned by what she saw as Loevinger's lack of integration of more recent work by authors such as Kegan (1982, 1994) and others working in the field of adult

development, into her theory. As a result, Cook-Greuter set out to revise and extend Loevinger's theory to address these weaknesses.

Firstly, Cook-Greuter (1999) offered a new scaffold or logic for the consciousness stages by detailing the structure of an underlying expanding 'perspective on the self'. Adapted from Kegan's (1982) work, Cook-Greuter introduced a distinction between what is subject (i.e. what the individual is identified with and thus cannot take a perspective on) and what can be taken as 'object (and thus be examined or dealt with) at each stage of development. As is the case with Kegan's model, Cook-Greuter (1999) was then able to explain both the strengths and limits of each stage of development, as well as anticipate the challenges individuals would likely need to negotiate in moving to the next stage of development. Thus, this scaffold provided a test of whether one stage was qualitatively different from the one preceding it and also served as the basis from which to make predictions (Cook-Greuter, 1999).

Cook-Greuter (1999) also incorporated the 'dialectic of development' into the underlying structure of consciousness development. This principle is also a part of Kegan's model (1982, 1994) as outlined above, and refers to the observation that the redefinition of the self that occurs with each stage seems to alternate in a regular fashion between differentiation (independence, separation and mastery) and integration (inclusiveness, participation, relatedness and connection). The stages that favour integration or inclusiveness are Self-protective, Conformist, Conscientious and Autonomous (as well as her new Unitive stage – see below). According to Cook-Greuter (1999) individuals at these stages "...make a new social context of their mental home base...[and]... tend to express more positive affect because of a growing sense of balance between one's separateness and one's sustaining connection with others." (p. 41). Those stages that favour differentiation are the Self-aware and Individualistic stages (as well as her new Construct-Aware stage – see below). At these stages, people

emphasise their difference and uniqueness in relation to the previous stage “...They tend to stress the boundaries, the distinctions and the differences to the previous way of perceiving themselves and the world...Because their basic need for relatedness is not fulfilled, they generally express more negative affect and more tension...” (Cook-Greuter, 1999, p. 41).

Although not relevant to the program of research articulated in this thesis, Cook-Greuter (1999) also extended Loevinger’s model by developing a more rigorous definition and measurement of the much rarer later stages of development. She replaced Loevinger’s final stage (originally labelled ‘Integrated’) with two additional stages (which she labelled as ‘Construct-Aware’ and ‘Unitive’ (but collectively described as ‘post-autonomous’) and developed a set of scoring categories for the WUSCT so that these two new stages could be scored using this same instrument. Recent qualitative research by Hewlett (2004) supported Cook-Greuter’s (1999) descriptions of the post-autonomous stages and provided additional detail about how post-autonomous individuals handle emotions and their strategies in effecting transformational change in others (Hewlett, 2004).

Cook-Greuter’s (1999; 2005) adaptations to the theory are summarised in Table 2.3.

Torbert’s adaptations of the Loevinger model

Torbert et al. (2004) adapted the work of Loevinger and Cook-Greuter to produce a model of development that aligned with the theory, but was intended to facilitate its wider application in organisational contexts. They called the stages ‘action logics’ and developed different labels for them, along with stage descriptions that relate to how they would manifest in adults within a work environment. In addition, in order to increase the face validity and pragmatic utility of the WUSCT for those in organisational contexts they renamed it the Leadership Development Profile (LDP) and adapted it by removing a quarter of the stems and

replacing them with work-related stems (Barker & Torbert, 2011). They also utilised Cook-Greuter's (1999) definitions and scoring manuals for the post-conventional stages.

Unfortunately however, unlike Loevinger, who facilitated self-training by including instructions and self-tests within her manuals, they did not make the scoring manual for this version of the test freely available and to this author's knowledge, they have not published validity and reliability studies in academic journals.

Table 2.3 shows the features of the stages of consciousness as adapted by Torbert et al. (2004) alongside those of Cook-Greuter (2005) and Kegan (1982; 1994).

The limitations of conventional consciousness

According to a meta-analysis by Cohn (1998) of 92 studies involving over 12,000 participants from a wide range of samples, as well as more recent research by Cook-Greuter (2004), the vast majority (80-85%) of adults stabilise at or below the Achiever stage of consciousness. This is well below the maximum potential for development identified by Loevinger's theory but it is consistent with findings of stabilisation below the maximum potential found in other areas of adult development, such as cognitive and moral development (Manners & Durkin, 2000). However, much research has demonstrated that growth in consciousness is not necessarily stable throughout adulthood and may continue to evolve, with adaptive advantages for the individual and society in a host of areas such as relationships (Zilbermann, 1984), parenting (Dayton, 1981), preventive healthcare (Gast, 1984; Michaelson, 1985), organisational development (Bushe & Gibbs, 1990; Guerette, 1986; Marrewijk & Were, 2003), career success (Vaillant and McCullough, 1987), protection against burnout (Lambie, 2007), adjustment to life changes (Bursik, 1991) and better leadership performance and organisational outcomes (see the following section).

Table 2.3: Stages of Consciousness Development

LOEVINGER'S MODEL				KEGAN'S MODEL		
COOK-GREUTER'S ADAPTATIONS			TORBERT'S ADAPTATIONS			
TIER	STAGE	SELF-DEFINITION	TYPICAL MANIFESTATIONS	SUBJECT	OBJECT	UNDERLYING STRUCTURE
PRECONVENTIONAL	IMPULSIVE (LOEVINGER & KEGAN)	First person perspective (focus on self only - unable to take the perspective of another). Self: rudimentary, physical self-labelling "me, mine" Other: fulfilment of needs on demand Differentiation: in crude dichotomies	Not included in Torbert et al. (2004) model	Cognitive: Perceptions Interpersonal: Social perceptions Intrapersonal: Impulses	Movement Sensation	Single point/ immediate/ atomistic
	SELF-PROTECTIVE (LOEVINGER) OPPORTUNIST (TORBERT) IMPERIAL (KEGAN)	Emerging second person perspective (able to focus on self and another). Self: single concrete features, minimal action-based self-description in terms of desire Other: competing for goods, space, dominance, power Differentiation: Beginning sense of others as having their own wants and will to get. 4.3% found to be at this stage (Cook-Greuter, 2004).	Short time horizon; focus on concrete things; often good in physical emergencies; deceptive; manipulative; views rules as loss of freedom; views luck as central; rejects critical feed-back; externalizes blame; distrustful; stereotypes; fragile self-control; hostile humour; flouts unilateral power, sexuality; treats "what can get away with" as legitimate; punishment = "eye for an eye"; positive ethic = even trade; timely action = "I win"	Cognitive: Concrete (actuality, data, cause and effect) Interpersonal: Point of view (role-concept, simple reciprocity/"tit for tat") Intrapersonal: Enduring dispositions (needs, preferences, self-concept)	Add: Perceptions Social perceptions Impulses	Durable category

Table 2.3: continued...

LOEVINGER'S MODEL				KEGAN'S MODEL		
COOK-GREUTER'S ADAPTATIONS			TORBERT'S ADAPTATIONS			
TIER	STAGE	SELF-DEFINITION	TYPICAL MANIFESTATIONS	SUBJECT	OBJECT	UNDERLYING STRUCTURE
CONVENTIONAL	CONFORMIST (LOEVINGER) DIPLOMAT (TORBERT) INTERPERSONAL (KEGAN)	Second person perspective (characterised by a focus on self and another). Self: several external features; vital statistics given; rudimentary internal states, negative avoided or suppressed Two types of other: 1) Own family, tribe, group, nation: provides identity, values and protection. Boundaries between self and in-group confused; over-identified. 2) Everyone who is different, or not part of my group belongs to the out-group (threat: them vs. us). 11.3% at this stage (Cook-Greuter, 2004).	Committed to routines; observes protocol; avoids inner and outer conflict; conforms; works to group standard; seeks membership, status; often speaks in favourite phrases, clichés, prefabricated jokes; face-saving essential; loyalty to immediate group; feels shame if violates norm; sin = hurting others; punishment = disapproval; positive ethic = nice, cooperative; timely action = "I'm on time"	Cognitive: Abstractions (Ideality, inference, generalisation, hypothesis, proposition, ideals, values) Interpersonal: Mutuality/Interpersonalism (role consciousness, mutual reciprocity Intrapersonal: Inner states (subjectivity, self-consciousness)	Add: Concrete Point of view	Cross-categorical Trans-categorical
	SELF-AWARE (LOEVINGER) EXPERT (TORBERT)	Early 3 rd person perspective (beginning to be able to look at oneself objectively) Abstract operations. Self: Separate self-differentiated from others; sense of specialness. Identity = clusters of external attributes, conventional traits, "self conscious" in the sense of readily feeling uneasy. Other: others too are seen as separate persons who are different from me. Need for constant comparison & measuring. Do others measure up to my ideas and standards? 36.5% at this stage (Cook-Greuter, 2004).	Interested in problem-solving; seeks causes; critical of self/others based on own craft logic; wants to stand out, be unique; perfectionist; chooses efficiency over effectiveness; dogmatic; accepts feedback only from objective acknowledged craft masters; values decisions based on technical merit; humour = practical jokes; sees contingencies, exceptions; positive ethic = sense of obligation to internally consistent moral order; timely action = fast, efficient		Enduring dispositions, needs, preferences	

Table 2.3: continued...

LOEVINGER'S MODEL				KEGAN'S MODEL		
COOK-GREUTER'S ADAPTATIONS			TORBERT'S ADAPTATIONS			
TIER	STAGE	SELF-DEFINITION	TYPICAL MANIFESTATIONS	SUBJECT	OBJECT	UNDERLYING STRUCTURE
CONVENTIONAL (CONTINUED...)	CONSCIENTIOUS (LOEVINGER) ACHIEVER (TORBERT) INSTITUTIONAL (KEGAN)	Late 3rd person perspective (clear separation of subject and object, knower and known). Formal operations Realm: Self in society, others with similar goals and aspirations Time frame: Self as it is (traits), self as it should be (goals, ideals) Preoccupations: Reasons, causes, goals, achievement, effectiveness, contracts and agreements. Positive equilibration: rational, analytical determined, conscientious, fair; successful; competent with high self-esteem Truth: Can be found through appropriate scientific methods (if not now, then later). 29.7% at this stage (Cook-Greuter, 2004).	Long-term goals; future is vivid, inspiring; welcomes behavioural feedback; timely action = juggling time demands to attain effective results; feels like initiator, not pawn; seeks generalizable reasons for action; seeks mutuality, not hierarchy, in relationships; appreciates complexity, systems; feels guilt if does not meet own standards; blind to own shadow, to the subjectivity behind objectivity; positive ethic = practical day-to-day improvements based on self-chosen (but not self-created) ethical system	Cognitive: Abstract systems (ideology, formulation, authorisation, relations between abstractions) Interpersonal: Institution (relationship-regulating forms, multiple-role consciousness) Intrapersonal: Self-authorship (self-regulation, self-formation, identity, autonomy, individuation)	Add: Abstractions Mutuality, interpersonalism Inner states Subjectivity Self-consciousness	System/ Complex
POSTCONVENTIONAL	INDIVIDUALISTIC (LOEVINGER) INDIVIDUALIST (TORBERT)	Early 4 th person perspective Relativism: discovery of personal and cultural conditioning and defensive self-deception Cognition: systems theory concepts perceived Positive equilibration: vivid individualism Truth: can never be found. Everything is relative; there is no place to stand or judge from (deconstructive Postmodernism). 11.3% found at this stage (Cook-Greuter, 2004).	Takes a relativistic perspective; focuses more on both present and historical context; often aware of conflicting emotions; experiences time itself as a fluid, changeable medium, with piercing, unique moments; interested in own and others' unique self-expression; seeks independent, creative work; attracted by difference and change more than by similarity and stability; less inclined to judge or evaluate; influences by listening and finding patterns more than by advocacy; may become something of a maverick; starts to notice own shadow (and own negative impact); possible decision paralysis			

Table 2.3: continued...

LOEVINGER'S MODEL				KEGAN'S MODEL		
COOK-GREUTER'S ADAPTATIONS			TORBERT'S ADAPTATIONS			
TIER	STAGE	SELF-DEFINITION	TYPICAL MANIFESTATIONS	SUBJECT	OBJECT	UNDERLYING STRUCTURE
POSTCONVENTIONAL (CONTINUED...)	AUTONOMOUS (LOEVINGER) STRATEGIST (TORBERT) INTERINDIVIDUAL/POST-MODERNISM (KEGAN)	Late 4 th person perspective Realm: Society and others with similar convictions and principles Time frame: own "history, lifetime" Cognition: metasystematic operations; General systems thinker Preoccupations: own development, self-actualisation, self-fulfilment processes Positive equilibration: well-balanced body/mind integration; autonomous, tolerant, insightful, growth-oriented; high self-esteem; overarching principles Truth: can be approximated; higher development is better since more complex arguments carry more weight than feeble ones. Higher is more adequate for functioning in an ever more complex global theatre. There are qualitative differences! 4.9% found at this stage (Cook-Greuter, 2004)	Recognises importance of principle, contract, theory, and judgement – not just rules, customs and exceptions – for making and maintaining good decisions; high value on timely action inquiry, mutuality, and autonomy; attentive to unique market niches, particular historical moments; interweaves short-term goal-orientedness with longer-term developmental process-orientedness; aware of paradox that what one sees depends on ones [stage of development]; creative at conflict resolution; enjoys playing a variety of roles; witty, existential humour; aware of and tempted by the dark side of power	Cognitive: Dialectical (trans-ideological, post-ideological, testing formulation, paradox, contradiction, oppositeness Interpersonal: Inter-institutional (relationship between forms, interpenetration of self and other) Intrapersonal: Self-transformation (interpenetration of selves, inter-individuation)	Add: Abstract system Ideology Institution Relationship-regulating forms Self-authorship Self-regulation Self-formation	Trans-system Trans-complex

Table 2.3: continued...

LOEVINGER'S MODEL				KEGAN'S MODEL		
COOK-GREUTER'S ADAPTATIONS			TORBERT'S ADAPTATIONS			
TIER	STAGE	SELF-DEFINITION	TYPICAL MANIFESTATIONS	SUBJECT	OBJECT	UNDERLYING STRUCTURE
POSTCONVENTIONAL (CONTINUED...)	INTEGRATED (LOEVINGER) CONSTRUCT AWARE (COOK-GREUTER) ALCHEMIST (TORBERT)	5th-person perspective Realm: Beyond own culture Time frame: beyond own lifetime; global-historical perspective Cognition: unitive concepts perceived; cross-paradigmatic Preoccupation: inner conflict around existential paradoxes and intrinsic problems of language and meaning making. Positive equilibration: Acceptance of tension and paradox, committed to service of self and others; humility in face of task Truth: No matter what level of abstraction and what level of cognitive insight one gains, one is always separated from the underlying nondual reality 2.0% found at this stage (Cook-Greuter, 2004).	Continually exercises own attention, seeking single-, double-, and triple-loop feedback on interplay of intuition, thought, action and effects on outside world; anchors in inclusive present, appreciating light and dark, replication of eternal patterns and emergence of the previously implicit; stands in the tension of opposites, seeks to blend them; intentionally participates in the work of historical/spiritual transformation; co-creator of mythical events that reframe situations; near-death experience, disintegration of ego identity; treats time and events as symbolic, analogical, metaphorical (not merely linear, digital, literal).			

NOTE: The information in column 3 is adapted from *Nine levels of increasing embrace* by S. Cook-Greuter, 2005, unpublished manuscript. Adapted with permission from the author. The information in column 4 is adapted from *Action Inquiry: The secret of timely and transforming leadership*, by B. Torbert et al., 2004, San Francisco: Berrett-Koehler. Copyright 2004 by Bill Torbert. Adapted with permission from the publisher. The information in columns 6-8 is reproduced from *In over our heads: The mental demands of modern life*, (p. 314-315), by R. Kegan, 1994, Cambridge, Massachusetts: Harvard University Press. Copyright 1994 by the President and Fellows of Harvard College.

Unfortunately, individuals operating from Achiever consciousness or below are unlikely to be able to deal with the kinds of complex adaptive challenges we are facing in our organisations, communities and globally. As can be seen from Table 2.3, the stages of consciousness development have been divided into pre-conventional, conventional and post-conventional tiers (Miller & Cook-Greuter, 1994). The stages in the pre-conventional tier are characterised by the impulsivity, lack of insight and simplistic thinking normally found in young children. Older children and adults who have not developed beyond these stages may be seen as hostile or opportunistic and may be given a psychiatric diagnosis such as impulsivity disorder or psychopathy (Hy & Loevinger, 1996). Research by Cook-Greuter (2004) estimated that less than 5% of the adult population in Western societies function within this tier.

It is within the three stages of the 'conventional' tier that about 77.5% of adults operate (Cook-Greuter, 2004). People within all three of these stages take norms, social categories and power structures for granted in terms of constituting the nature of a stable reality and do not recognise that they are seeing the world through a particular lens or frame that limits choice. However, it is the last two stages in this tier – Expert and Achiever – that are the most prevalent and have the most relevance to the program of research in this dissertation.

According to McAuliffe (2006) and Rooke and Torbert (2005), individuals operating from the Expert stage - around 36.5% of the adult population (Cook-Greuter, 2004) - try to exercise control by perfecting their knowledge in their personal and professional lives. In a professional sense this can lead to a single-minded adherence to a particular ideology, theory or management innovation, but this can also be seen in parenting and other areas of life. They tend to make decisions based on technical merit (disregarding the larger systems of which they are a part) and, although they may be great individual contributors, managers at this stage tend to expect that their subordinates will do things their way (and give feedback in these

terms) and they often find it difficult to collaborate or delegate. They tend not to ask for feedback (Barker & Torbert, 2011) and can be quite hostile if they feel their expertise is being challenged – however, they may be quite self-critical (Manners & Durkin, 2001; McAuliffe, 2006; Rooke & Torbert, 2005).

Cook-Greuter (2004), Hy & Loevinger (1996) Manners and Durkin (2001) and McAuliffe (2006) have described the Achiever stage (around 30% of the adult population according to Cook-Greuter (2004)) as characterised by striving to achieve goals, the use of self-evaluated standards, self-critical, having principled morality, mutuality in relationships and the recognition of multiple possibilities and perspectives in situations (enhancing the capacity for teamwork). At this stage, thinking and decision-making begins to moves beyond personal concerns to consider those of the wider organisation, field or society. Although Achievers readily seek out feedback for self-improvement in order to better achieve goals, they do not seek out (and tend to reject if offered) feedback that challenges the framework from which they are operating - and so can become trapped in their paradigm (Cook-Greuter, 2004; Hy & Loevinger, 1996; McAuliffe, 2006).

Although as Cook-Greuter (1999) argued, the currently predominant conventional Expert and Achiever worldviews have “...produced the industrial revolution and evolved into the current global technology, which has solved many dire problems of humanity and created technological wonders unimaginable fifty years ago” (p. 13), Donovan (1997) has noted that these worldviews are also responsible for the major problems currently facing the planet because of their limited and relatively short-term empirical-analytic mode of thinking “...well suited to calculating the means to attain predetermined ends, but deficient when it comes to more fundamental matters – such as determining what ends are to be pursued, and challenging the premises on which calculations proceed.” (p. 26). It is for these reasons that

constructive developmental theorists argue that resolution of the 21st-century adaptive challenges we are facing in our organisations, communities and at a global level, requires the capacities that evolve in the post-conventional tier of consciousness development (Cook-Greuter, 1999; Cook-Greuter & Miller, 1994; Hewlett, 2004; Kegan 1994).

Once an individual enters the first stage of the 'post-conventional' tier (Individualist) - around 11% of the population (Cook-Greuter, 2004) - their focus tends to shift from achievement to psychological development and relationships. Such growth is valued for its own sake, with feedback sought out to enhance self-knowledge rather than as a means to goal achievement and success. A recent study reported by Barker and Torbert (2011) confirmed that a large majority of those who measured at Individualist or higher sought out voluntary feedback. At the Individualist stage, there is a heightened sense of individuality, and with this, a concern about emotional dependence and a greater tolerance of difference in self and others (Hy & Loevinger, 1996). People at this stage tend to understand diverse perspectives as 'interpretations' and question the assumptions of self and others when framing problems and developing solutions. There is also a growing awareness of inner conflicts and paradoxes (without a sense of resolution) and a greater ease with change and uncertainty. Individualists tend to have an increased understanding of complexity and systems thinking, as well as a broader and longer-term view of the organisation and society (Cook-Greuter, 2004; Hy & Loevinger, 1996; Joiner & Josephs, 2007; Manners & Durkin, 2001; Marko, 2006; Pfaffenberger, 2007; Torbert et al., 2004).

As development proceeds within the post-conventional tier (less than 7% of the population according to Cook-Greuter (2004)) thinking becomes more integrated and complex and individuals are increasingly more able to recognise the constructed nature of reality and how perspectives are shaped by their own and other's level of consciousness development, and to

critically examine existing institutional structures and conventional norms, practices, values, beliefs (Torbert et al, 2004). Adults operating from the later stages have been found to have greater tolerance of paradox and ambiguity, to be able to think multi-systemically, and to anticipate and creatively adapt to changing contingencies and life circumstances (Cook-Greuter, 2004). According to Cook-Greuter (2004) from an organisational perspective people operating within the post-conventional tier “...have a broader, more flexible and more imaginative perspective on the whole organisation and its multiple contexts. They tend to cultivate relationships with many stakeholders, see promising connections and opportunities in novel places, and deal with problems in adaptive and proactive ways.” (p. 278).

As Cook-Greuter and others have argued, from a societal perspective, people who operate from post-conventional consciousness are needed more than ever before, because of their transformational capacity, agility, creativity, flexibility and mature insight (Barker & Torbert, 2011; Cook-Greuter, 2004; Joiner & Josephs, 2007; Kegan & Lahey, 2009; Rooke & Torbert, 2005).

The relationship between consciousness development and leadership

As Ghosh et al. (2013) have noted, “Since leaders are adults, it is obvious that their [consciousness] growth as adults will have implications for their leadership capacity” (p. 234). A primary message of the work of Torbert et al. (2004) and of Kegan and Lahey (2009) is that a person’s stage of consciousness influences his or her approach to the tasks of management and leadership, and that people who operate from later stages tend to be more effective managers and transformational leaders. Similarly, Laske (2003), Eigel and Kuhnert (2005) and Strang and Kuhnert (2009) have equated consciousness development with the development of the capacity to lead others, and Akivou and Bradbury-Huang (2009), Day et al. (2009), Helsing and Howell (2013) and Joiner and Josephs (2007) have all articulated models of leader

development that have the psychological capacities associated with consciousness development at their core, serving as a fundamental platform for the development of leader identity, skills and behaviour.

McCauley et al. (2006) argued that constructive developmental theory has the potential to act as an integrative framework in the leadership field. They undertook a comprehensive review of the literature relating constructive developmental theory to leadership. In summary, these studies (all cited in McCauley et al. 2006) showed that individuals operating at stages below Achiever were, in alignment with the theory, reluctant to delegate (Hasegawa, 2004; Hirsch, 1998; Spillett, 1995), avoided holding people accountable and felt threatened by disagreement (Hasegawa, 2004; Spillett, 1995), were very concerned by how they were seen by others (Hasegawa, 2004) and were challenged in ill-defined roles, in presenting authentically in stressful situations and in managing competing demands between work and home life (Van Velsor & Drath, 2004). Those in leadership roles at pre-Achiever stages were also more likely to see their superiors as judges and experts (Spillett, 1995). Similarly, followers (teachers) at these earlier stages were found to appreciate leaders (principals) who provided answers, structure and order (Roth, 1996). Those in leadership roles at the Achiever stage were found to be able to negotiate performance standards with others, express disagreement and evaluate the complaints of others (Spillet, 1995), to involve staff in decisions and delegate responsibility to them (Hirsch, 1998) and to see their superiors as a resource (Spillett, 1985). They were also rated as more inspiring by their followers than those at the Expert stage (Steeves, 1997). However, they were found to be challenged by respecting those operating from earlier stages and also by aligning their views and priorities with those of others (Van Velsor & Drath, 2004). Followers at the Achiever stage were found to be much less reliant on the advice and support of their leaders than those at earlier stages (Roth, 1996).

Studies reviewed by McCauley et al. (2006) which looked at the relationship between level of consciousness development and leader performance, found the former was significantly positively related to a standard measure of leadership performance in military cadets (Lewis et al., 2005) and to more effective decision-making style and use of power to tackle ambiguous problems (Smith, 1980), more complex problem-solving approaches (Merron, Fisher and Torbert, 1987), more emphasis on the leader's role as an agent of change and less reliance on external authority (Weathersby, 1993) in managers. Bushe and Gibbs (1990) found that level of consciousness development was significantly related to peer and expert ratings of change-oriented consulting competence in organisational development consultants (who often play a leadership role within organisations). However, Mehlretter (1995) did not find a relationship between the managers' level of consciousness development and their co-worker's perceptions of their contribution to the organisation.

Only three studies reviewed by McCauley et al. (2006) had included participants at the post-conventional levels of development. One of these was a study of military officers which found level of development was strongly related to effective decision-making (Lewis & Jacobs, 1992). The other two studies were undertaken by Torbert. The first of these (Fisher & Torbert, 1991) involved 17 highly educated individuals in senior corporate or consulting roles. It found that Strategists (when compared to the Achievers) made more conscientious efforts to understand subordinates frames of reference and to use them as a basis for synthesising new shared understandings (as opposed to attempting to cultivate subordinates to their own frames of understanding), and were more likely to undertake negotiation with superiors in order to achieve desired outcomes through a new shared frame; identify their perceptions as perceptions; base their actions on principles rather than rules and; bring others along with

them by understanding others frames and using them to modify their strategy in an iterative process that repeatedly reframed the problems.

Finally, a study 10-year study of ten organisational development efforts by Rooke and Torbert (1998) found that the 5 organisations that had a CEO operating at the Strategist level and above transformed successfully in terms of growth, profitability, quality, strategy and reputation. Of the remaining five organisations with CEO at pre-Strategist levels, only two experienced positive transformation during the period of the study. The correlation between CEO developmental level and degree of transformative organisational change was statistically significant.

A study by Eigel and Kuhnert (2005) was not included in the review by McCauley et al. (2006). This involved 21 CEOs of public companies from diverse industries who were given the Subject-Object Interview (SOI). The interviews were used to assess level of consciousness, but they were also rated by subject matter experts for their effectiveness in areas of leadership (for example, visioning and conflict management). When compared to a normative sample of 764 highly educated professionals in the same age demographic, there was a statistically significant difference in the distribution of consciousness scores, with the CEO group having a far greater proportion of individuals at Achiever and above. It was also found that the level of consciousness was positively and significantly related to leader effectiveness ratings.

A more recent longitudinal study was undertaken by Bartone, et al. (2007). It utilised the SOI to track the development of military cadets over 4 years and compare this with two comprehensive leader performance measures in which supervisors, peers, subordinates and instructors contributed ratings for each individual based on performance on various leadership dimensions. It was found that consciousness level was positively associated with supervisor

performance ratings as leaders. Over half the group for whom a full set of data were available (n = 21), showed evidence of a growth in consciousness over the course of the study and this development was associated with higher peer and supervisor ratings of leader effectiveness in some areas (including consideration for others, ethics, delegating, supervising and overall rank). Unfortunately, although its longitudinal design meant the study provided a novel contribution to the adult/leader development field, it was limited by the small the sample size (the authors noted that the expense and time associated with the use of the SOI had, in part, limited the number of participants included). In light of this however, the researchers followed a conservative approach in their analyses of the data.

Harris and Kuhnert (2008) conducted a methodologically sound study with 74 participants, who were measured on the SOI and on a 360-degree measure of leadership effectiveness. Level of consciousness development was found to predict overall leadership effectiveness ratings, as well as those specifically from superiors, peers and subordinates (although not self-ratings, which were lower than those from the other sources). It was also found that those at higher levels of development were more effective in a number of leadership areas, including visioning and personal grounding, as well as more concrete competencies such as managing performance, leading change, catalysing teams and cultivating talent.

Strang and Kuhnert (2009) conducted a study with a sample of 67 management executives. They used to SOI to measure level of consciousness development, as well as a 360-degree measure of leader performance and a commercially developed self-report measure of personality that mapped to the Five Factor Model (FFM). They found that stage of consciousness development was a significant predictor of leadership performance ratings from all sources, and from superior, peer and subordinate ratings separately. Mean performance scores as rated by peers were significantly lower at Opportunist and Diplomat levels than at

post-conventional levels. In addition, consciousness level accounted for a unique component of the variance in 360-degree leadership performance ratings by peers and subordinates, beyond that which was accounted for by personality dimensions. Power analyses revealed that the sample size was too small, and the effect sizes were also small. However, considering this limitation, a larger sample size may have produced stronger results. In addition, the authors noted that the study should be replicated using the NEO PI-R which is an extremely robust measure of the FFM.

Brown (2011) utilised semi-structured, in-depth interviews with 13 leaders and change agents who measured at Strategist or higher on the WUSCT to explore their approach to leading complex sustainability initiatives. He made three major propositions based on the data; that they designed initiatives from a deep inner foundation, grounding the design in transpersonal meaning, embracing uncertainty and seeing their work as a spiritual practice; that they accessed powerful internal resources and theories to design, including intuition as well as systems, complexity and integral theories and; they adaptively managed the design, adopting various roles to catalyse and support the initiative and cultivate their own and others development, as well as that of the collective. The study is interesting as it provides insights into the ways of thinking and acting of people at the highest stages of development. However, it is based on a very small sample and further research is needed to test whether the findings can be supported, as well as whether these more complex ways of thinking actually lead to more effective sustainability leadership outcomes.

Finally, a study by Helsing and Howell (2013) applied Kegan's model of adult development to participants in a leadership development fellowship at the World Economic Forum. Although 32 participants were interviewed initially using the SOI, only 11 were available for follow-up in their third year of the program. Of these, the 7 who scored at Achiever were all rated as having

high potential by external raters who were unaware of the SOI score. In contrast, the remainder scored at pre-Achiever levels and they were not rated as high potential. In addition, to utilising the SOI to assess the level of consciousness development, the interviews were studied to look for emergent themes that connected this capacity to leadership performance. From this analysis, the authors concluded that the specific ways that the participants experienced successes and struggles aligned with their developmental stage. However, this relationship was not always straightforward, as in some cases high intelligence masked the internal struggles of participants at earlier stages of development.

In their critical review of the literature relating constructive developmental theories to leadership, McCauley et al. (2006) noted that many studies to date suffered from small sample sizes, the inclusion of a restricted range of stages of consciousness development (with very few including participants at post-conventional levels) and the lack of participants from outside of the United States. In addition, they pointed out that studies to that date had been almost exclusively cross-sectional in their design, as well as piecemeal – with few researchers undertaking cumulative programs of research that build and refine understanding. Only some of these limitations have been overcome in more recent studies. Nevertheless, there is a growing body of research that supports the view that consciousness development is a fundamental platform for the development of leadership capacity. As Helsing and Howell (2013) argued, this perspective can illustrate the course of a leader's growth and it can explain why leaders with very different personality traits can be successful if their level of consciousness development matches the complexities of their role. In addition, a constructive developmental perspective assumes that leadership capacity can be intentionally nurtured by focussing on deep underlying psychological capacities (Helsing & Howell, 2013).

McCauley et al. (2006) called for more studies in this area to not only overcome the methodological limitations they identified, but also to develop stronger links to existing and emerging lines of leadership research. As an example, they suggested such research could usefully include the study of individual differences (such as personal styles and preferences, skills and abilities) as well as contextual variables – all of which have been studied extensively in leadership research. Similarly, Harris and Kuhnert (2007) and Strang and Kuhnert (2009) suggested that research should consider the predictive ability of consciousness development on leadership effectiveness over and above other established predictors of the latter (such as cognitive ability and experience).

The process of consciousness development

Overview of the models of Manners and Durkin and Palus and Drath

Although, as noted previously, higher levels of consciousness have been found to be associated with a host of adaptive advantages (not least of which in leadership capacity), consciousness development appears to stabilise for the majority of the population at a stage which is well below the maximum potential identified by Loevinger's theory (Cohn, 1998; Cook-Greuter, 2004). In an effort to understand why this might be the case, Manners and Durkin (2000) formulated a conceptual framework to explain the processes involved in consciousness development in adulthood. This was based on an extensive review of Loevinger's theoretical reflections, studies of intervention programs that have been designed to promote consciousness development in adults, as well as theory and research into moral stage development and the processes involved in adult personality development.

Although research has consistently shown that successfully coping with complex and ambiguous life challenges, either self-initiated or externally prompted, is associated with an

increase in consciousness development (Bursik, 1991; Helson, 1992; Helson & Roberts, 1994; Helson and Wink, 1987; King, 2001; Pfaffenberger, 2007), Manners and Durkin (2000) stressed that in order to trigger such development, life experiences must have particular properties. These properties are; being challenging for the individual's current stage of consciousness (accommodatively challenging); being personally salient; being interpersonal in nature; and being emotionally engaging and challenging (but amenable to positive interpretation). In addition, they argued that development is influenced by the degree of exposure to such life experiences, along with dispositional personality traits that interact in complex ways to influence the likelihood of such exposure, whether such events are perceived as disequilibrating in relation to existing consciousness structures and, if so, how this is resolved. For example, they argued that personality characteristics such as openness to new experiences, self-acceptance and the desire for challenge may influence the types of life experiences a person is exposed to (proactive interaction). Factors such as sense of self-efficacy and personal mastery, locus of control, openness to change and whether the experience represents the crystallisation of a number of previous related experiences, may impact the way in which such experiences are perceived and responded to (reactive interaction).

As an example, Manners' and Durkin's (2000) reviewed studies concerned with the effect of various life experiences and cognitive development on consciousness development. They found that studies of the effects of higher education were equivocal, and concluded that the latter does not necessarily represent a disequilibrating experience that can trigger consciousness development – it depends on how higher education is perceived. They argued that higher education is much more likely to be disequilibrating for a mature age student who places the knowledge acquired against a background of life experience and is concerned with

the meaning and implications of what is learned, than for a young student who sees higher education primarily as a cognitive process, concerned with the accumulation of knowledge and who is therefore, more concerned with whether the subject matter will be examined.

Similarly, a study by Bursik (1991) of 104 women who were tested at 5 months and 17 months following separation from their husbands, found that only those women who increased from a low to a high level of adjustment to the divorce situation over the course of the study showed a significant increase in mean consciousness level. Those whose adjustment did not change, or decreased, did not show any change in consciousness level. A further example is provided by King (2001) who studied people who had lived through significant life events. She found that those who had seen their life events as challenging their worldview and had consciously struggled with the conflict this caused, were more likely to have a higher consciousness stage score on the WUSCT.

Manners' and Durkin's (2000) framework can be compared to a model developed by Palus and Drath (1995). The latter was based on Kegan's (1982; 1994) work, and, like that of Manners and Durkin, it represents consciousness development as an accommodative restructuring of schemas in response to disequilibrating experiences. However, Palus and Drath developed their model explicitly to explain how consciousness development can be promoted in leadership development programs.

Palus and Drath (1995) noted the importance that Kegan (1982) placed on the broader environment when considering consciousness development. Like Kegan, they argued that consciousness stages are not just individually situated perspectives, they are "...held' – validated, echoed, and supported in various ways – by holding environments, consisting of various milieus of the workplace, family, community and society" (p. 10). Thus, such

environments in which the individual is situated may facilitate or inhibit consciousness development by providing support for existing meaning structures or challenging them (Palus & Drath, 1995). For example, whilst the family environment of an adult may provide support for their current level of consciousness, the workplace environment may challenge this. Furthermore, Palus and Drath noted how societal norms, such as perceptions or stereotypes about gender, race, age and disability, may falsely characterise people as 'not ready' for developmental opportunities, whereas other norms (such as age-related expectations for example) might accentuate perceptions of readiness.

In their model, Palus and Drath (1995) argued that in order to promote consciousness development, leadership programs must have five requisite interwoven processes; they must broadly and actively engage the meaning structures of the individual in experiential exercises; they must provide both disequilibrium and equilibrium – appropriate challenge, as well as support and balance; they must address the process of meaning-making and; they should include post-program follow-up and ongoing activities in order to help actualise the potential for development the program initiates. These authors stressed the importance of providing both challenge and support for development. Without challenges, exposure to the limitations of the current level of meaning-making will not occur. Block (1982) noted that people have a tendency to find comfortable niches that protect them from such challenges in their environment (for example, associating with similar people with similar views). However, an individual can experience fear and loss of meaning during the change process, and this requires a supportive and safe environment to help them overcome the immunity to change that sometimes results (Palus & Drath, 1995).

Like Manners and Durkin (2000), Palus and Drath (1995) also considered the individual psychological and personality factors (particularly openness to experience), as well as

individual state factors (e.g. developmental stage, stage stability, life satisfaction, chronological age, acute illness) that may facilitate or inhibit the consciousness development process. They noted that these overlap and operate interdependently, and when considered together, may allow an assessment of individual's 'readiness for development'.

In the following sections, the theory and research on which Manners and Durkin (2000) and Palus and Drath (1995) based their frameworks, as well more recent research that is relevant to, or has tested aspects of, these frameworks will be summarised.

The equilibration model of consciousness stage transition

Manners and Durkin (2000) noted that although Loevinger (Loevinger & Blasi, 1976) had been criticised for not articulating a coherent theoretical account of the processes involved in consciousness stage transition (Broughton & Zahaykevich, 1988), the Piagetian equilibration model of cognitive development has been implicitly accepted in research into consciousness development theory, although it has not been the subject of specific investigation. Within this view, when adults are confronted with information that does not fit their existing schema for the self or the world around them, a state of disequilibrium is created in which the individual is motivated to restore equilibrium in one of two ways; either by assimilating the new information into the existing schema or by changing the existing schema to accommodate the new information (Manners & Durkin, 2000).

It was Block's (1982) and Appley's (1990) adaptations of the Piagetian concepts of equilibration, assimilation and accommodation in their application to personality development, as well as Baumeister's (1994) discussion of the role of attribution in the perception of, and response to, life events however, that were of most interest to Manners and Durkin (2000) in the development of their framework. Block (1982) argued that, unlike cognitive development which occurs in relation to the more "passive and passionless world

about which one can generate unequivocal understandings” (p. 289), personality development occurs in the context of an interactive, emotional world, “where understandings never arise above uncertainty or ambiguity” (p.289). In Block’s view, disequilibrium creates dysphoric arousal (in the form of anxiety, a feeling of helplessness, distress or unease) which functions to motivate the individual to take some form of action to reduce this. This may be achieved through the less disruptive (thus, more likely) path involving assimilation of the new information into existing schemas. Alternatively, equilibrium may be restored by deconstructing, reorganising and/or creating new structures of consciousness to accommodate the discordant information, a process that can lead to prolongation of the dysphoric arousal, until the new schemas have been developed (Manners & Durkin, 2000).

According to Baumeister (1994), individuals may also avoid disequilibrating experiences impacting on their existing stage structures by discounting the information, selective inattention or the use of attributional processes (i.e. explaining the discrepant information in such a way as to not challenge the existing perception) – thus allowing the individual to maintain stable self-perceptions, belief systems and relationship patterns. This stability may be threatened when such processes can no longer be maintained and a ‘crystallisation of discontent’ occurs in which “...contradictory events link together to form a large pattern of negative, dissonant thought” (Baumeister, 1994, p304).

Importantly, Baumeister (1994), Block (1982) and Appley (1990) discussed the ways in which individual personal and social factors may facilitate or inhibit personality development. Block (1982) argued that such factors may influence the preference and/or readiness for either assimilation or accommodation in response to disequilibrium (neither being particularly adaptive if overused), whereas Appley (1990) suggested that they may influence the frequency, extent and nature of the potentially disequilibrating challenges a person is exposed

to, as well as the perception of these challenges and the response to them. These ideas are central to Manners' and Durkin's (2000) framework for the processes involved in adult consciousness development.

Crystallisations of discontent or desire

A study by Heatherton and Nichols (1994) provided support for Baumeister's (1994) notion of the crystallisation of discontent. Their research with 119 participants, found stories reporting successful change attempts were significantly more likely to report focal events, intense emotional experiences and threats that resulted in crystallisations of discontent than those stories reporting failed attempts at change. However, more recent research by Bauer, McAdams and Sakaeda (2005) involving two studies of the decision narratives of 51 and 67 participants respectively, has suggested that an alternative process - a 'crystallisation of desire', in which a desired future becomes clearer and the individual is drawn towards it – might also precipitate life change. In their research, those participants who emphasised a crystallisation of desire reported higher well-being (study 1) and better decision outcomes (study 2) than those who emphasised a crystallisation of discontent.

Both the latter studies looked at life changes in general, and did not specifically explore consciousness development. Two recent studies of consciousness development however, have some relevance, although they did not specifically explore crystallisations of discontent or desire. Marko (2006) undertook structured interviews with 21 people who scored at the Individualist stage or higher on the WUSCT. He deliberately selected these later stage participants as he wanted them to reflect on tipping points for development across the spectrum of stages through which they had developed (i.e. not specifically on their most recent experience of development). Although Marko (2006) had the aim of identifying 'facilitative agents' ('ah-ha moments', insights and visions) that triggered consciousness development,

many of the quotes from participants in the study do appear to describe crystallisations of desire – and often these seem to have occurred after periods of significant generalised or specific discontent.

Pfaffenberger (2007) undertook a qualitative study with 22 people who scored at the Individualist stage and above, and compared them with 6 people who scored at the Achiever stage. Her aim was to understand how people at higher levels of development account for their growth in terms of events, processes, factors and activities. Like Marko, she did not restrict participants to reflection on their most recent experience of development, asking instead that they reflect on the kinds of experiences that had shaped them, why these were important and whether any specific events stood out as turning points. She found descriptions of overcoming life challenges were almost ubiquitous in the stories of consciousness growth in her study. However, when asked about growth in an open-ended way, postconventional participants in this study rarely mentioned distinct turning points, focal events or crystallisations of discontent or desire, but talked more generally about processes and challenges such as parenting, living in a foreign culture and job promotions that led to the discovery of new parts of themselves and emotions that had previously been denied.

These equivocal findings leave the question of whether crystallisations of discontent or desire are a feature of the process of consciousness development open.

State readiness factors for consciousness development

State readiness factors are changing characteristics of the individual that may affect consciousness development at a given time. These include the current developmental stage and the stability of this, the state of satisfaction with various aspects of life, acute problems such as depression, anxiety or other illness' and possibly also chronological age (Palus & Drath, 1995).

Stage-related readiness

The current developmental stage of an individual may influence development depending on the nature of the disequilibrating life experience. As has already been noted, Manners and Durkin (2000) undertook an extensive review of the published and unpublished studies on intervention programs designed to promote adult consciousness development and concluded that in order to be effective, the latter must be structured at one or two stages above the stage of the individuals it is targeting. This was tested and supported by Manners et al. (2004) in research utilising an experimental design. They found their specially-designed intervention was only effective in promoting consciousness development in those for whom the program content was structured at least one stage higher. In contrast however, it is possible that a development program (or other potentially disequilibrating life experience) that is structured too far above an individual's range of understanding may seem absurd, overwhelming and/or threatening and may elicit hostility or indignation, neither of which is likely to be conducive to consciousness development (Day et al., 2009; Garvey-Berger, 2012; Palus & Drath, 1995).

Stage stability

The stability of an individual's stage of consciousness may also act as a mediator for consciousness development. Such development does not appear to occur in whole leaps, so although a shift may appear as sudden and dramatic, considerable preparation will likely have taken place beforehand (McAuliffe, 2006). Dunsky (2002) integrated the views of various theorists to develop a description of the consciousness transition process as a series of phases – see Table 2.4. The first phase is 'Stability' in which there are minimal fluctuations. Interventions that offer disequilibrating challenges to this stability may help to potentiate the developmental process (Palus & Drath, 1995) – perhaps provoking movement towards the next phase, which Dunsky (2002) labelled 'Anomaly'. The individual enters the 'Anomaly' phase as he or she begins to experience persistent challenges to stage stability. These gradually build

up, leading to cognitive dissonance, confusion, frustration and denial (or what Palus and Drath (1995) described as 'global dissatisfaction') as the individual continues to struggle to assimilate the information into existing structures. Life events that offer new perspectives for a person in this phase of transition may help them to fully confront the limitations of their current stage to the point where assimilation processes can no longer be maintained (Manners & Durkin, 2000) and they begin to move into the next transition phase. Palus and Drath (1995) have noted however, that such life events may not be viewed positively by individuals in the Anomaly phase, as they may (necessarily) result in greater frustration and confusion.

Table 2.4: Integrated Consciousness Stage Transition Phase Descriptions

Transition phase	Typical characteristics
Stability	Stable dynamic balance; high coherence; minimal fluctuations; no observable change vector
Anomaly	Discrepant information, cognitive dissonance; ill-defined sense that something is wrong; negative affect possibly including anger, frustration, depression, denial, impatience; loss of meaning; confusion; failure; questioning; increasing fluctuations; efforts to assimilate are dominant
Possibility	Understanding and new possibilities begin to emerge; experimentation; disorganisation; hesitation; self remains identified with, but begins to disembody from (let go of) current balance; ongoing uncertainty, ambivalence and sometimes guilt; pull of new attractor begins to be felt; beginning of accommodation
Tipping	Contours of emerging balance take shape; identification shifts to the emerging balance; fluctuations begin to diminish; affect becomes more positive; new attractor becomes dominant; old pattern may be pushed away
Consolidation	Integration of new structure with old; extension to additional areas of self and others
New stability	Stable adaptation achieved at a new level

NOTE: From *Transitions in the structures of consciousness* (p. 67), by H. Dunsky, 2002 Saybrook Graduate School and Research Centre, San Francisco: Unpublished Master's thesis. Copyright 2002 by Halim Dunsky. Reprinted with permission from the author.

Once an individual begins to let go of their current stage and accommodate some of the new information as new possibilities begin to emerge, they are said to be in the 'Possibility' phase. This is followed by the 'Tipping' phase, which occurs once the new stage becomes dominant and the old pattern is rejected. For those in the 'possibility' or 'tipping' phases, interventions to help promote development of consciousness to the level the individual is already moving into might be viewed very positively as such individuals experience the stimulation of a new way to understand themselves and the world (Palus & Drath, 1995).

The 'Tipping' phase is followed by a phase of 'Consolidation' in which the individual applies the new frame to more situations, before finally entering a new phase of stage stability. Interventions that assist the consolidation process through exposing individuals to more situations to which their new frame can be applied may be useful and appropriate for individuals in this phase (McAuliffe, 2006), and may help them 'awaken' fully into their new stage of consciousness (Palus and Drath, 1995).

The research into attempts at life change outlined in the previous section might have relevance to the consideration of consciousness stage stability. Although it does not appear to have been the subject of research to date, it seems possible that this crystallisation process might also be a feature of the consciousness stage transition process (particularly in terms of how Dunsky (2002) described the movement through the 'Anomaly', 'Possibility' and 'Tipping' phases). This information could provide a useful insight into, and support for, the equilibration process of consciousness development, as well as offering helpful clues for assessing developmental readiness and informing program design.

Age-related readiness factors

Although there is evidence that consciousness level stabilises for most individuals by early adulthood (Cohn, 1998; Cook-Greuter, 2004; Truluck & Courtenay, 2002), Palus and Drath (1995) and Helson, Mitchell & Moane (1984) argued that chronological age might also offer trigger points for consciousness development in the sense that adherence (and non-adherence) to sociocultural norms may help to channel such development - particularly around the ages of 30, 40 and 50. Palus (1993) found clusters of transformative life experiences reported at around these ages, and concluded that "...social expectations frame these "decade age markers" as a kind of developmental precipice, establishing in some cases a self-fulfilling prophecy for transition" (Palus & Drath, 1995, p. 9). Similarly, Van Velsor and Musselwhite (1986) argued that a 'midlife crisis' occurring in the early to mid-40's and characterised by self-doubt and personal re-examination, triggered for example by marriage crises, career burn-out or retrenchment, could be a catalyst for development. Again, these proposals were not based on research specifically on consciousness development, and there does not appear to have been any research that has yet investigated them in that context.

Personality traits and consciousness development

As noted above, Manners and Durkin (2000) and Palus and Drath (1995) argued that certain personality factors may enhance or constrain consciousness development by influencing the degree of exposure to potentially disequilibrating life experiences, whether these are perceived as disequilibrating and, if so, whether this is resolved by assimilation or accommodation. Based on research into personality development in adulthood Manners and Durkin suggested that openness, self-acceptance, self-efficacy, flexibility, the desire for challenge and internal locus of control may all enhance the potential for consciousness development. Palus and Drath suggested openness to experience might be favourable to consciousness development within a leadership development context. More recently, Bartone

et al. (2007) added reflectivity, achievement orientation and hardiness as additional possibilities.

There is a considerable body of research that has examined the relationship between consciousness development and specific dimensions of personality in adulthood. Pals and John (1998) reviewed this work and much of it appears to validate Loevinger's theory of consciousness development, with findings that, as the theory suggests, higher levels of consciousness development are associated with open-mindedness and liberal thinking (McAdams, Booth & Selvik, 1981), tolerance (Helson and Roberts, 1994; White, 1985), psychological mindedness (Helson & Roberts, 1994; Westenberg & Block, 1993), psychological complexity (McRae & Costa, 1980), self-awareness, resiliency and cultural sophistication (Westenberg & Block, 1993), empathy (Carlozzi, Gaa & Liberman, 1983), lack of conformity to traditional gender roles in women, and intellectualisation and tolerance for ambiguity (Helson & Wink, 1987), as well as autonomy and internal locus of control (White, 1985). In contrast, having authoritarian attitudes has been found to be associated with the Opportunist and Diplomat stages (Browning, 1983; McRae & Costa, 1980) and fear and anger temperament was found to be negatively associated with consciousness development (McRae & Costa, 1983) as was the unsocialised expression of hostile and antisocial impulses (Starrett, 1983). Also in line with the theory, friendliness was found to be most pronounced at the Diplomat stage in young adults (Westenberg & Block, 1993).

One of the most consistent findings has been a positive relationship between consciousness development and Openness to Experience on the NEO-PI. The NEO-PI was developed by Costa and McCrae (1992) and measures five higher-order dimensions of personality called the Five Factor Model (FFM). The dimensions comprising the five factor model are Extraversion, Openness to Experience, Conscientiousness, Agreeableness and

Neuroticism. Openness to Experience (a factor which represents the tendency to be to be imaginative, versatile, intellectual, unconventional, autonomous and entertain a wide range of interests) has been found to be positively (and significantly) related to consciousness development as measured by the WUSCT (Einstein and Lanning, 1998; Hogansen & Lanning, 2001; Kurtz & Tiegreen, 2005; Morros, Pushkar & Reis, 1998). Although the correlation has been lower, several studies have also found a significant positive correlation between WUSCT scores and Agreeableness – a factor which represents the tendency to be altruistic, sympathetic and caring towards others as well as trusting and compliant (Einstein & Lanning, 1998; Hogansen & Lanning, 2001; Kurtz & Tiegreen, 2005). According to Costa and McCrea (1998) people with high Openness and high Agreeableness have a progressive orientation towards social change as well as a basic faith in human nature. As Kurtz and Tiegreen (2005) noted, the latter is actually an apt description of a person with a high level of consciousness development according to Loevinger's model.

In spite of the popularity of the Myers Briggs Type Indicator (MBTI) as a measure of personality preferences (as described in Chapter 1), only one published study appears to have utilised this to explore the relationship between personality and consciousness development. This was undertaken by Bushe and Gibbs (1990) and it found a modest but significant (.28) positive correlation between consciousness development and the MBTI preference for Intuition (N), and a modest but significant (-.26) negative correlation between the preference for Sensing (S) and consciousness development. No relationships between consciousness development and any of the other MBTI preferences were found – however, the sample size was small (N=64). More recently, Joiner and Josephs (2007) and Josephs (2011) referred to an 'in-depth study' of 12 managers representing seven different MBTI types that they had undertaken, which found no correlation between any of the MBTI preferences and level of

consciousness, leading them to conclude that “...our research indicates that personality type and level of...[consciousness]...are completely unrelated variables” (Joiner & Josephs, 2007, p. 12). However, they did not present any additional information about this research and it is difficult to see how a study of only 12 individuals could possibly be adequate for such correlation analyses or such a conclusion.

The finding of a correlation between consciousness development and MBTI Intuition is not surprising, given that the latter has been found to be highly correlated with Openness on the NEO-PI (Furnham 1996; Furnham, Moutafi & Crump, 2003, MacDonald, Anderson, Tsagarakis & Holland, 1994; McCrae & Costa, 1989) which, as noted above, has also been found to be correlated with consciousness level. It also makes sense in terms of both MBTI and consciousness development theory because, when compared to people with a preference for Sensing, those with a preference for Intuition have been found to have higher levels of autonomy, personal growth and positive relations; to be more open to the positive potential in people and situations; and to invest themselves enthusiastically in that potential (Bushe & Gibbs, 1990; Cranton, 2006; Harrington & Loffredo, 2001). These qualities may positively influence both the types of potentially disequilibrating life experiences a person is exposed to, and the ways in which such experiences are perceived and responded to. MBTI Intuition, may thus serve as an internal ‘readiness’ factor for consciousness development and has also been associated with advancement to top executive ranks and career achievement (McCaulley, 1990, Zaccaro, 2001). In contrast, people with a preference for Sensing (S) have been found to lack tolerance for ambiguity (Steckroth, Slocum & Sims, 1980) and to rely on routine (Cranton, 2006). Such factors might both mitigate against self-initiated exposure to novel life experiences and predispose to resolving the disequilibrium created by such exposure by assimilation (and thus schema - and consciousness stage - stability). Sensing types, Cranton (2006) argued, might

require immersion into an entirely new situation – such as a big change in environment or culture – in order to their shift habits of mind.

In spite of the limited research looking at the MBTI and consciousness development, studies of the other dichotomous MBTI preferences do suggest ways in which some of these (and combinations thereof) may have advantages for consciousness development. For example, associations between the preference for Perceiving and flexibility, imagination, adaptability, curiosity and openness to new ideas – all characteristics that are found to be more prevalent in higher stages of consciousness development - have been found (Myers et al., 2003). A preference for Perceiving has also been found to correlate with NEO-PI Openness (Furnham, 1996; MacDonald, Anderson, Tsagarakis & Holland, 1994; McCrae & Costa, 1989) - a factor that is correlated with consciousness development as noted above. A correlation has also been found between the MBTI Feeling preference and Agreeableness on the NEO-PI (Furnham, 1996; MacDonald, Anderson, Tsagarakis & Holland, 1994; McCrae & Costa, 1989) which, in turn, has been found to correlate with consciousness development (Einstein & Lanning, 1998; Hogansen & Lanning, 2001; Kurtz & Tiegreen, 2005). Those with a preference for Feeling tend to make decisions by weighing personal and group values and feelings. They are concerned with the human (as opposed to the technical) aspects of problems, as well as having a desire for warmth and harmony. Because they aim to maintain positive relationships, they tend to be responsive to the opinions and questions of others, trying to understand how they feel and entering into their frame of mind with empathy in order to see their perspective (Cranton, 2006). Those with a preference for Thinking on the other hand, tend to rely on principles of cause and effect and to be objective and impersonal in making decisions (Myers et al., 2003).

Research into the groupings of the MBTI preferences has also revealed particular combinations that might be more or less likely to be associated with higher consciousness development. Research with Sensing-Thinking (ST) types has found, for example, that they showed most risk avoidance when in operating in challenging environments – a factor that might lead to less learning from such environments, and possibly less likelihood of experiencing them - whereas Sensing-Feeling (SF), Intuitive-Feeling (NF) and Intuitive-Thinking (NT) types were more risk tolerant (Walck, 1996). Intuitive-Perceiving (NP) types have been described as unconventional, independent spirits who seek out new challenges, new ideas and new people with a focus on exploring and experiencing the world and all of its potential (Myers et al., 2003). NP and NF types have also been found to be associated with higher creativity on various measures (Myers et al., 2003). These characteristics seem likely to enhance self-initiated exposure to, and learning from, novel life experiences (Myers et al., 2003). On the other hand, research with Sensing-Thinking-Judging (STJ) types has found them to be resistant to change (Isachsen & Berens, 1988; Clancy, 1997). Because stability is very important to them, those with STJ preferences tend to focus on the status quo, seek order, dislike ambiguity and solve problems by relying on past experiences (Clancy, 1997). These factors seem likely to mitigate against seeking out novel life experiences and might also lead to the resolution of disequilibrium created by such experiences by assimilation (i.e. incorporating the new information into one's existing schemas – thus stability of the schemas). It is for this reason that Lang (1997) argued that leaders with Intuitive-Feeling-Perceiving (NFP) preferences might be required to cope with the rapid pace of change in organisations.

One of the important criticisms of the body of work relating personality variables to consciousness development is that many of the studies have been cross-sectional and thus it is difficult determine which individual differences are a consequence of consciousness

development (and thus associated with particular stages) and which foster it (Westenberg & Block, 1993). One way to overcome the need for a longitudinal design with a challenge of this nature would be to study the variables within quasi-experimental research using an intervention that has the potential to promote consciousness development to see whether personality traits are related to the development that occurs. To date, a study of this nature does not appear to have been undertaken.

Interventions to promote consciousness development

McCauley et al (2006) expressed their disappointment that there has been little research that has examined the dynamics of developmental movement and they called for more studies that examine how training, development or coaching programs impact on consciousness development. Although, adult constructive developmental theories have been used to inform leadership and executive development interventions for many years (Cook-Greuter, 2004; Kegan & Lahey, 2001; Laske, 1999, 2003; McAuliffe, 2006; Palus & Drath, 1995; Torbert et al., 2004) very limited research has been published in relation to these interventions. The small body of research on interventions to promote consciousness development that does exist has largely been conducted with younger adults (university students, student nurses and teachers) or with prison inmates, and the studies have not included participants at the postconventional levels of development. They have also often suffered from small sample sizes, truncated ranges and other methodological problems (Manners & Durkin, 2000).

Since the extensive critical review of the research literature published by McCauley et al. (2006) which suggested that constructive developmental theory can provide an integrative framework for the leadership field, the latter has begun to infiltrate mainstream leadership and executive development literature more significantly. Recently, Kegan and Lahey (2009) and Day et al. (2009) argued that efforts to develop leadership capacity should shift their focus

from what Cook-Greuter (2004) has described as horizontal or lateral development – focusing on knowledge, skills and behaviours that expand and enrich a person’s current way of meaning-making – to much more powerful ‘vertical development’ which supports people to transform their current way of making sense of the world (shift their consciousness) so that they can take a broader perspective. There have also been increasing calls for, and interest in, the design of interventions to promote adult consciousness development in the workplace, in business schools and in the leadership/executive development arena (Akrivou & Bradbury-Huang, 2011; Akrivou & Bradbury-Huang, 2014; Drago-Severson & Blum-DeStefano, 2014; Ghosh, Haynes, & Kram, 2013; Joiner & Josephs, 2007; Kegan & Lahey, 2009; Valcea, Hamdani, Buckley & Novicevic, 2011). However, there remains very little research in this area to date.

The next two sections will summarise some of the recent literature involving workplace-based interventions and programs to promote consciousness development.

The workplace as a holding environment for consciousness development

Interest in the workplace as a holding environment for consciousness development has begun to increase recently, because of the realisation that leader development and adult consciousness development are inextricably linked (Ghosh et al., 2013). In addition, as Valcea et al (2011) noted, the workplace can offer a relatively continuous and complex environment for prolonged developmental activity that is accommodatively challenging, interpersonal in nature, as well as personally salient and emotionally engaging and challenging for individuals, thus aligning with Manners’ and Durkin’s (2000) framework.

Based on their extensive consulting experience, Kegan and Lahey (2001; 2009) introduced a map for overcoming the personal and organisational immunity to change that potentially thwarts consciousness development. This map is essentially a tool for the development of complexity of mind through self and organisational awareness. It requires the identification of

a performance goal, the development of an inventory of all the things that the individual (or team) is doing (or not doing) that work against this goal, generating possible competing goals or commitments (in the form of behaviours that protect from fears but prevent progress on the goal) and finally unearthing (or making 'object') the assumptions behind these competing commitments. This awareness-raising process is then followed with a variety of recommended tasks and activities that are designed to help overcome the immunity to change. The process can then, of course, be repeated with other goals. Although Kegan and Lahey, (2009) cite many successful case studies with individuals and teams that have utilised this process, there does not appear to have been any formal research undertaken to test whether shifts in consciousness have occurred.

Rooke and Torbert (2005) have also based their suggestions for workplace-based interventions to promote consciousness development on extensive consulting experience. They describe how exposure to particular types of workplace experiences may facilitate development. These include the search for new perspectives triggered by loss of faith in ones work, boredom, burnout, depression, irritability and anger; external events such as a promotion that may give the person the opportunity to expand capabilities; changes to work practices and environments that lead to new professional growth opportunities; as well as planned and structured interventions that incorporate Torbert's et al (2004) particular form of self-inquiry – called action inquiry (encouraging self-examination and interpersonal awareness through a continuous process of 'meditation-in-action' - reflection and reframing of perspectives on experiences).

Rooke and Torbert (2005) also suggest specific interventions to help people at the Expert stage move to the Achiever level. These emphasise getting results through flexible strategies rather than having one 'correct' method that must be used in a particular way, as well as

exercises to help them become aware of their own (and others) assumptions and to help them consider the perspectives of others. They suggest that in order to promote development beyond the Achiever level, longer-term (1-2 year) strategies are required that involve repeated and intense experiences that encourage self-awareness and reflection as well as the development of awareness of other world views and the skills of action inquiry. Again, these methods do not appear to have been comprehensively tested, although two related studies were reported by Torbert (1994) which examined the impact of restructuring an MBA program to successfully encourage the practice of action inquiry. The latter are described in the next section.

More recently, Valcea et al. (2011) have used constructive developmental theory and Manners' and Durkin's (2000) framework to suggest how a combination of challenge and support within the workplace might work to promote consciousness development in leader-follower dyads. For those at the Diplomat or Expert stages of development, they proposed challenges in the form of promoting individualised delegation of assignments in situations where established norms and rules are inadequate, and that place the individual in situations of conflict of loyalty in order to promote the growth of their own standards of judgement. In addition, they suggested individualised feedback that exposes the inadequacy of rules and norms in terms of their efficiency and effectiveness and demonstrates the value of conflict for uncovering ways to improve effectiveness. For those at the Achiever stage, they suggested participation in decisions that are complex, ill-defined, and involve multiple stakeholders with different points of view. They argued that this would encourage the Achiever to question their own ways of thinking and propose solutions that respond to a variety of concerns. They further proposed that this be supported by feedback that centres on recognition of the value of different perspectives and on offering ideas about how to integrate these. In a similar vein,

Ghosh et al. (2013) have described how constructive developmental theory could inform the different kinds of behaviours (confirming and contradictory) necessary from teams of mentors (developmental networks) to enable growth and effectiveness in leaders located at different stages of development.

Again, although all the above suggestions align with constructive developmental theory, there do not appear to be any studies that have tested them to date (with the exception of Torbert's (1994) testing of 'action inquiry' – see below).

Programs to promote consciousness development

Along with the growth in interest of the workplace as a holding environment for consciousness development, there is also a growing interest in using constructive developmental theory to inform the design of specific leadership development and other programs to promote such growth. However, as noted above, there has been very little research in this area to date, as it has only been in relatively recent times that researchers have begun to place attention on the factors that might facilitate progress to advanced stages of consciousness development (McCauley et al., 2006).

Manners and Durkin (2000) reviewed 16 older studies (ranging from 1978-1993) designed to promote adult consciousness development. They noted that many of these did not specify the consciousness stage of participants at pre-test and those that did were limited to participants at conventional consciousness stages. In addition, some of the studies had methodological problems and/or suffered from a lack of conceptual clarity, although ten succeeded in promoting consciousness development and two of the more rigorous studies also demonstrated that it is possible to promote consciousness development beyond the Expert stage. Of the seven studies that construed their intervention in terms of an equilibration model of developmental movement, all but one reported a significant increase in

consciousness level – whereas only three of the nine other studies produced significant change. Of the successful and methodologically sound programs, one involved training in Transcendental Meditation for 90 male prison inmates (Alexander et al., 1990) and two utilised the Deliberate Psychological Education approach, in which the program format and content were related to consciousness development and moral development theories. These combined theoretical input with experiential components such as emotional awareness and empathy training (Kwasnick, 1982; Oja, 1978). The other successful programs designed the intervention to be personally salient for the participants. Examples of the latter included training in responsibility, cooperation and autonomy in a nursing trainee program (White, 1985), empathy training for trainee teachers using experiential methods (Hurt, 1977) and in-depth discussion of moral dilemmas and counselling for perspective-taking in prison inmates (MacPhail, 1989).

Manners and Durkin tested aspects of their own framework (although unfortunately not the aspects relating to the mediating impact of personality traits on consciousness development) in an intervention program that aimed to promote development beyond the Expert stage (Manners, Durkin & Nesdale, 2004). They engaged 58 participants aged 22 to 53 years, and utilised an experimental design. The intervention was delivered as one 90 minute session per week over 10 weeks in the form of a training program entitled 'Building Better Relationships' in which participants were offered training in self-awareness, communication, conflict resolution, stress management and goal-setting. The intervention was thus designed according to their framework, to be personally salient for participants, as well as emotionally and cognitively engaging and interpersonal in nature. To ensure that the program would be structurally disequilibrating for participants at the Expert stage, the content was structured at one to two stages higher than that stage.

Manners et al. (2004) found the mean increase in consciousness stage for the intervention groups was approximately half a stage, whereas the control group showed no increase from pre-test to post-test. In the intervention groups, all of the participants who scored at the Diplomat consciousness stage at pre-test developed in response to the intervention and sustained the change at the follow-up (4 months post-program). Sixteen of the 21 participants in the intervention groups who scored at the Expert stage at pre-test advanced one full stage as a result of the intervention, and 15 of these had sustained this stage increase at the 4-month follow up. Only one of the eleven participants in the intervention groups who had scored above the Expert stage at pre-test developed a full stage following the intervention. The latter was not maintained at follow-up. In the control group, only one participant had transitioned a stage from pre-test to post-test.

Manners et al. (2004) argued that these results provided a clear empirical demonstration that sustainable consciousness stage transition is possible in adulthood. In addition, the intervention they developed was highly effective for those for whom the program was disequilibrating in terms of their consciousness structures (i.e. for those at or below the Expert stage). The intervention was not effective for those who scored above the Expert stage at pre-test. Manners et al. (2004) argued that this was due to the fact that, for these latter individuals, the intervention represented an insignificant degree of structural difference from their current consciousness stage.

Palus and Drath (1995) utilised constructive developmental theory to suggest how typical 1-week leadership programs could be used to create disequilibrium in meaning-making for their participants that might potentiate development at a later stage. As described earlier, they argued that such programs would require five requisite interwoven processes - they must be experiential, they must create disequilibrium (along with appropriate support and balance),

they must address the process of construction of meaning-making, and they should take some responsibility for actualising the potential for development they create through follow-up and ongoing activities begun in the program). However, it does not appear that any research has been undertaken to test this model.

Palus and Drath (1995) suggested that Musselwhite's (1985) findings in relation to the impact of the workplace environment on transfer of learning from a leadership development program might be applicable to consciousness development. The latter found that job promotions (particularly moving into a first management role, moving from manager to executive and becoming the head of an organisation) and other major changes in work responsibilities that occurred 6-12 months before the program had a positive impact. However, if these occurred immediately after the program (from 1 to a few months) then this was considered to have a negative impact on learning transfer. Interestingly, it was also found that being dissatisfied with work and dissonance in the work environment (such as financial problems or restructuring) had a positive impact on learning transfer – as did returning to a supportive organisational climate after the program and having a supportive spouse. The need to travel a lot for work, being newly married, having a baby, illness or injury of spouse (or self) and personal financial problems had a negative effect. As mentioned above, these findings related to learning transfer rather than consciousness development per se, and to date, there do not appear to have been any studies undertaken to test whether such findings are also applicable to the latter.

Research evidence for the efficacy of action inquiry in promoting consciousness development comes from two studies, both of which are described by Torbert (1994). In the first of these, Torbert described the restructuring of the 20-month MBA program at the Wallace E. Carroll School of Management at Boston College in the USA, to encourage the

practice of action inquiry. Prior to the restructuring, only 2.5% of students scored at consciousness stages higher than Achiever at graduation. However, after the restructure, 10% of 180 students shifted a full stage during the program and there was an average of .1 of a stage shift amongst the remainder of the students (with half-stage shifts and regressions balancing each other out). Importantly, of the 16 students who, in their second year of the program, participated in a voluntary consulting role that provided additional opportunity to practice action inquiry, all but one showed a full stage shift at graduation.

A second, follow-up study (Torbert, 1994) examined 15 graduates of the restructured MBA program approximately six years after their graduation. Of these, 6 had participated in a voluntary action inquiry group that had met every three weeks for 5 years to reflect together on experiences in their lives. These 6 participants had developed, on average, one full stage at the final testing, whereas the remaining 9 had only developed an average of $1/18^{\text{th}}$ of a stage. This difference was statistically significant. These results are promising and the combination of the two studies is rare in its scope and efforts to study impact.

Despite the growing interest in interventions to promote consciousness development, empirical research in this area remains almost as sparse as it was when McCauley et al. (2006) published their review. Until recently, constructive developmental theorists have been primarily concerned with the nature of meaning-making at the various developmental stages - how people at various stages of development make sense of the world and themselves and how this changes with increasing development - and have been much less concerned with why and how it occurs (McCauley et al, 2006). There is still very little evidence to support speculation about the factors that might foster growth in general, and at each of the different developmental stages, or about the individual 'readiness' factors (individual difference variables such as personal styles or preferences and contextual variables such as challenges in

the workplace environment and other life challenges) that might enhance or constrain such development (Bartone et al., 2007; McCauley et al., 2006). Furthermore, there is a particular lack of research into how movement to post-conventional levels of consciousness development might be facilitated. As McCauley et al. (2006) noted, post-conventional growth is not part of normal development so there are few social supports for it, and interventions designed to trigger growth at the conventional levels cannot be assumed to have the same effect at post-conventional levels. Moreover, research into how people experience their own consciousness development and what they believe has been important in promoting this growth, is rare (the studies by Marko (2006) and Pfaffenberger (2007) outlined above, appear to be the only research of this nature).

Summary and conclusions from the literature review

Constructive developmental models such as those of Loevinger's (Loevinger & Blasi, 1976; Loevinger, 1987) and Kegan (1982; 1994) provide a valid and reliable framework for understanding the growth in an individual's way of constructing meaning through the lifespan which is comprised of an invariant sequence of stages in which higher stages represent greater and greater complexity, cognitive differentiation and integration. As meaning-making expands, so does self- and interpersonal awareness, cognitive complexity, flexibility, reflective capacity, personal autonomy and responsibility, as well as tolerance for difference and ambiguity (Cook-Greuter, 2004; Manners & Durkin 2001). Thus, the growth of adult consciousness development to post-conventional levels is likely to be associated with many adaptive advantages for the individual and society.

Adult constructive development theory and research has recently begun to impact the field of management and leadership, with McCauley et al. (2006) arguing that it has the potential to act as an integrative framework in the field. Although research in this areas is still in its infancy

and many studies to date have suffered from small sample sizes and other methodological problems, and few have included adults at postconventional stages of development (McCauley et al., 2006), a growing body of recent research is showing associations between increasing consciousness development and better leadership performance and organisational outcomes.

Constructive developmental theorists argue that resolution of the 21st-century adaptive challenges we are facing in our organisations, communities and at a global level, will require a fundamental mind shift in leadership – a new way of thinking and comprehending that transcends the interests of any one individual, group or country, recognises the ways in which our realities are constructed and integrates multiple perspectives and multiple systems to challenge existing ways of thinking (Palus & Drath, 1995). These are the capacities that have been found to evolve at postconventional levels of development (Cook-Greuter, 1999; Cook-Greuter & Miller, 1994; Hewlett, 2004; Kegan 1994). Unfortunately however, the vast majority of adults across a wide range of samples demonstrate consciousness stages well below the maximum potential (Cohn, 1998; Cook-Greuter, 2004; Manners & Durkin, 2000).

In an effort to understand the latter, Manners and Durkin (2000) developed a conceptual framework that represented consciousness stage transition as restructuring of schemas in response to life experiences that are personally salient, interpersonal in nature, emotionally engaging and challenging, but which is facilitated or inhibited by the degree of exposure to such life experiences, along with dispositional personality traits that interact in complex ways to influence the likelihood of such exposure, and how the experiences are perceived and responded to. A similar model developed by Palus and Drath (1995) also emphasised the importance of holding environments as mediators for consciousness development, consisting of various milieus of the workplace, family, community and society. In addition, they considered various personality traits (such as openness to experience) and state factors, such

as developmental stage, stage stability, life satisfaction, chronological age and acute illness, which may impact on an individual's readiness for development. They noted that these overlap and operate interdependently, and when considered together, may allow an assessment of individual's 'readiness for development'.

The framework of Palus and Drath (1995) does not appear to have been specifically tested in any studies, and that of Manners and Durkin (2000) has only been tested in a single study (Manners, Durkin & Nesdale, 2004). The latter found support for the framework in terms of the characteristics of life experiences that are required to trigger consciousness development. However, the study did not include consideration of personality (or other) factors that may act as mediators for consciousness development, nor did it consider timing factors or crystallisations of discontent or desire (although the latter were mentioned for consideration in future research). It was also targeted to development within the conventional tier (from Expert to Achiever) and did not include participants at, or promote development to, post-conventional stages.

Links have been consistently found between consciousness development and Openness to Experience and Agreeableness (as measured by the NEO-PI). However, in spite of its greater popularity for use with non-clinical populations, the Myers Briggs Type Indicator (MBTI) has rarely been used to date in exploring the relationship between personality and consciousness development. Similarly, the role of state factors such as current stage of development, stage stability and age, as well as other contextual variables related to the environment (such as job promotions, or major changes in work responsibilities, dissonance in the work environment or major life changes such as having a baby, illness or injury, marriage or divorce) have not been considered in such research to date.

There is a particular lack of research into how movement to post-conventional levels of consciousness development might be facilitated by training, developmental programs or coaching. Many authors have argued that the capacities that evolve at these levels that will be required for tackling the complexity of our 21st Century challenges, but post-conventional growth is not part of normal development so there are few social supports for it, and interventions designed to trigger growth at the conventional levels cannot be assumed to have the same effect at post-conventional levels (McCauley et al. 2006).

The consideration of trait, state, and contextual variables, in quasi-experimental and longitudinal studies with large samples designed to explore the impact of interventions to promote consciousness development, particularly to post-conventional levels, would help to address some of the criticisms that McCauley et al. (2006) made in relation to the body of research linking consciousness development and leadership to date.

The program of research described in this dissertation was designed to further an understanding of how late-stage conventional and post-conventional consciousness might be developed. It considers whether particular personality preferences and combinations thereof (as measured by the Myers-Briggs Type Indicator or MBTI) are associated with higher consciousness levels and whether these might act as inhibiting or facilitating factors in consciousness development. It also examines whether Australian community leadership programs promote consciousness development - particularly to post-conventional levels. Finally, it explores the perspectives of those who have recently shifted a stage of consciousness (particularly those who have shifted to the first post-conventional stage) in relation to how they have changed, and the nature and timing of experiences (within the program and/or in their broader lives) that they believe may have triggered such changes.

Chapter 3: Study 1 - Personality preferences and their relationship to consciousness development in Australian leadership program participants

Statement of Authorship

By signing the Statement of Authorship, each author certifies that their stated contribution to the publication is accurate and that permission is granted for the publication to be included in the candidate's thesis.

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Preface to Study 1

There is a considerable body of research that has examined the relationship between consciousness development and specific dimensions of personality in adulthood. This was reviewed in the preceding chapter. It has been suggested that certain personality factors may enhance or constrain consciousness development by influencing the degree of exposure to potentially disequilibrating life experiences, whether these are perceived as disequilibrating and, if so, whether this is resolved by assimilation or accommodation (Manners & Durkin, 2000; Palus & Drath, 1995). In spite of the popularity of the Myers Briggs Type Indicator (MBTI) as a measure of personality preferences, only one published study appears to have utilised this to explore the relationship between personality and consciousness development.

Although Westenberg and Block (1993) argued that without longitudinal studies it is difficult determine which individual differences are a consequence of consciousness development (and thus associated with particular stages) and which foster it, one way to overcome the need for a longitudinal design with a challenge of this nature is to study the variables within quasi-experimental research using an intervention that has the potential to promote consciousness development to see whether personality traits are related to the development that occurs. The first study in this dissertation set out to explore the possible relationships between consciousness development and MBTI personality preferences in people participating in Australian community leadership programs using such a design.

Abstract

The growth of adult ego development to post-conventional levels is associated with many adaptive advantages for the individual and society. However, the vast majority of adults across a wide range of samples demonstrate ego stages well below the maximum potential. In an effort to advance understanding of why and how development to higher ego levels might occur for some individuals and not others, we explored whether particular personality preferences and combinations thereof (as measured by the Myers-Briggs Type Indicator or MBTI) are associated with higher ego levels and whether particular personality preferences might act as inhibiting or facilitating factors in ego development. Participants were 374 adults (aged 18-61; 50% female) undertaking 11 community leadership development and 2 professional management development programs. After adjusting for effects of age and education, a preference for Intuition on the MBTI was associated with significantly higher ego development on program entry and with greater ego development during the programs. These results are consistent with previous research and provide support for Manners' and Durkin's (2000) proposal that dispositional personality characteristics may enhance or constrain ego development.

Keywords: Myers Briggs Type Indicator; MBTI; Washington University Sentence Completion Test; WUSCT; Leadership Development Level, community leadership.

Introduction

Described as one of the most comprehensive constructs in the field of developmental psychology (Westenberg & Block, 1993), Loevinger's stage theory of ego development (Loevinger & Blasi, 1976) provides a framework for conceptualising the growth in an individual's way of constructing meaning through the lifespan. Loevinger proposed an invariant sequence of stages, each characterised by qualitatively distinct conscious

preoccupations, expressions of impulse control and interpersonal and cognitive styles (Manners & Durkin, 2001). Each stage shift transforms perceptions of reality, offering a more integrated perspective (Cook-Greuter, 1999). Development proceeds toward greater self and interpersonal awareness, decreasing defensiveness and increasing flexibility, reflection, skill in interacting with the environment, tolerance for difference and ambiguity, cognitive complexity, responsibility and personal autonomy (Cook-Greuter, 2004). Table 3.1 displays a synopsis of each of these stages. Critical reviews of Loevinger's theory and its measurement tool, the Washington University Sentence Completion Test (WUSCT) have concluded that there is substantial empirical support for the construct and discriminant validity of both the theory and the WUSCT (Cohn & Westenberg, 2004; Hauser, 1976; Loevinger, 1979; Manners & Durkin, 2001).

According to a meta-analysis by Cohn (1998) of 92 studies involving over 12,000 participants from a wide range of samples, as well as more recent research by Cook-Greuter (2004), the vast majority (80-85%) of adults stabilise at or below the Self-Aware ego stage. This is well below the maximum potential for development identified by Loevinger's theory but it is consistent with findings of stabilisation below the maximum potential found in other areas of adult development, such as cognitive and moral development (Manners & Durkin, 2000). However, much research has demonstrated that growth to higher ego levels does occur in some individuals and is associated with adaptive advantages in relationships (Zilbermann, 1984), parenting (Dayton, 1981), preventive healthcare (Gast, 1984; Michaelson, 1985), organisational development (Bushe & Gibbs, 1990; Guerette, 1986; Marrewijk & Were, 2003), management and leadership performance (Barker & Torbert, 2011; Joiner & Josephs, 2007; King & Roberts, 1992; McCauley, Drath, Palus, O'Connor & Baker, 2006; Merron, 1985; Merron, Fisher & Torbert, 1987; Rooke & Torbert, 1998; Strang & Kuhnert, 2009; Torbert et al., 2004),

Table 3.1: Loevinger’s Stages of Ego Development

TIER	STAGE	TYPICAL MANIFESTATIONS
PRECONVENTIONAL	IMPULSIVE	Demanding; impulsive; conceptually confused; concerned with bodily feelings, especially sexual and aggressive; no sense of psychological causation; dependent; good and bad seen in terms of how it affects the self; dichotomous good/bad, nice/mean.
	SELF-PROTECTIVE	Wary; complaining; exploitive; hedonistic; preoccupied with staying out of trouble, not getting caught; learning about rules and self-control; externalising blame.
CONVENTIONAL	CONFORMIST	Conventional; moralistic; sentimental; rule-bound; stereotyped; need for belonging; superficial niceness; behaviour of others seen in terms of externals; feelings only understood at banal level; conceptually simple, “black and white” thinking.
	SELF-AWARE	Increased, although still limited, self-awareness and appreciation of multiple possibilities in situations; self-critical; emerging rudimentary awareness of inner feelings of self and others; banal level reflections on life issues: God, death, relationships, health.
	CONSCIENTIOUS	Self-evaluated standards; reflective; responsible; empathetic; long term goals and ideals; true conceptual complexity displayed and perceived; can see the broader perspective and can discern patterns; principled morality; rich and differentiated inner life; mutuality in relationships; self-critical; values achievement.
POSTCONVENTIONAL	INDIVIDUALISTIC	Heightened sense of individuality; concern about emotional dependence; tolerant of self and others; incipient awareness of inner conflicts and personal paradoxes, without a sense of resolution or integration; values relationships over achievement; vivid and unique way of expressing self.
	AUTONOMOUS	Capacity to face and cope with inner conflicts; high tolerance for ambiguity and can see conflict as an expression of the multifaceted nature of people and life in general; respectful of the autonomy of the self and others; relationships seen as interdependent rather than as dependent/independent; concerned with self-actualisation; recognises the systemic nature of relationships; cherishes individuality and uniqueness; vivid expression of feelings.
	INTEGRATED	Wise; broadly empathic; full sense of identity; able to reconcile inner conflicts, and integrate paradoxes. Similar to Maslow’s description of the “self-actualised” person who is growth motivated, seeking to actualise potential capacities, to understand his/her intrinsic nature, and to achieve integration and synergy within the self (Maslow, 1962).

NOTE: From “A Critical Review of the Validity of Ego Development Theory and Its Measurement,” by J. Manners and K. Durkin, 2001, *Journal of Personality Assessment*, 77(3), p. 544. Copyright 2001 by Taylor & Francis. Reprinted with permission.

career success (Vaillant and McCullough, 1987), protection against burnout (Lambie, 2007), adjustment to life changes (Bursik, 1991) and the development of complex sustainability change initiatives (Brown, 2011).

Recently, Barker and Torbert (2011), Cook-Greuter (2004), Joiner and Josephs (2007) and Rooke and Torbert (2005) have all argued that adults who operate from post-conventional developmental levels are in an optimal position to make an important leadership contribution to the world because of their transformational capacity, agility, creativity, flexibility and mature insight. Donovan (1997) noted that a critical mass of such shifts in consciousness is essential for humanity to address the adaptive challenges of our times.

However, the processes involved in ego development and the reasons some people reach post-conventional levels when the vast majority do not, remain unclear. Although the lack of a coherent theoretical account of such processes was one of the criticisms of Loevinger's theory (Broughton & Zahaykevich, 1988) recently researchers have begun to focus on the factors that might facilitate progress to advanced stages (Manners & Durkin, 2000; Manners, Durkin & Nesdale, 2004; Marko (2011); Pfaffenberger, 2005). To this end, Manners and Durkin (2000) developed a conceptual framework based on Loevinger's theoretical reflections and associated research – including studies of intervention programs that have been designed to promote ego development in adults, as well as theory and research into moral stage development and the processes involved in adult personality development. Their framework represents ego-stage transition as an accommodative restructuring of schemas in response to self-initiated or externally-prompted life experiences that are emotionally engaging and challenging (but amenable to positive interpretation), personally salient, interpersonal in nature, and that challenge the person's existing ways of seeing the world. Factors that might facilitate progress to advanced development appear to include the degree of exposure to such life experiences

along with dispositional personality traits that interact in complex ways with life events to influence the likelihood of such exposure, whether such events are perceived as disequilibrating in relation to existing ego structures and, if so, whether this is resolved by assimilation (i.e. incorporating the new information into one's existing schemas) or accommodation (i.e. the construction of new schemas). For example, they argue that personality characteristics such as openness to new experiences, self-acceptance and the desire for challenge may influence the types of life experiences a person is exposed to (proactive interaction) and factors such as sense of self-efficacy and personal mastery, locus of control and openness to experience may impact the way in which such experiences are perceived and responded to (reactive interaction).

Loevinger and others who take a developmental approach to personality, viewing it as evolving over time in response to the environment, have often been locked in intellectual battles with those who conceptualise personality differences as innate dispositions that are stable across time. However, Kurtz and Tiegreen (2005) and Wilber (2000) have argued that although these two traditions are often viewed as incompatible approaches to understanding human individuality, this need not be the case. It makes sense that differences between people at the same stage of ego development might be explained by differing dispositional personality factors (amongst other things) and vice versa. As Manners and Durkin (2000) have noted, it also makes sense that dispositional personality characteristics may enhance or constrain ego development.

One of the most popular inventories used to measure personality constructs outside the realm of academic psychology is the Myers Briggs Type Indicator - or MBTI (Bayne, 2003; Capraro & Capraro, 2002; Rushton, Morgan, & Richard, 2007). It has proved to be a very useful

tool in counselling, education and business for describing personality in lay terms and helping people understand the nature and value of individual differences (Pittenger, 2005).

The MBTI differs from most other trait-based personality instruments in that the eight characteristics it defines do not vary in quantity. Rather, they are four pairs of dichotomous constructs that were specified or implied in Jung's (1921) theory of personality and describe opposite, but equally valid, ways in which we use our minds (Myers, Briggs, McCaulley, Quenk & Hammer, 2003). The first dichotomy indicates differences in the way people orient their energy – either directing it primarily to the external world of people and things (Extraversion - E) or primarily to their inner world thoughts and reflections (Introversion - I). The second indicates differences in the way people take in information and the kind of information they like and trust, with some preferring to take in information using their senses and focus on the present and what is real and tangible (Sensing – S) and others preferring to go beyond what is real or concrete and focus on the future – patterns, possibilities, meanings and connections (Intuition – N). The third dichotomy indicates differences in the way people make decisions, with those with a preference for Thinking (T) preferring to base decisions on impersonal, objective logic and those with a preference for Feeling (F) preferring a person-centred, values-based process. The fourth indicates differences in orientation to the external world, with some having a preference for planning and organising (Judging – J) and others preferring spontaneity and flexibility (Perceiving – P). These sets of opposite preferences result in 16 possible “type” combinations. Each type (e.g., ENTJ or ISFP) will typically show characteristics resulting from the dynamic interplay of preferences from which it is comprised, such that each type is greater than the sum of its parts (Myers et al. 2003). There is a large – and growing - body of research that describes the temperaments, relationship choices and satisfaction, educational and career choices and performance, leadership and management performance, physical and mental

health, as well as stress and coping characteristics that are associated with the various preferences and their dynamic combinations.

In spite of the popularity of the MBTI, only a single study could be found in which it had been used to explore the relationship between personality and ego development. This was undertaken by Bushe and Gibbs (1990) and it found a modest but significant (.28) positive correlation between ego development and the MBTI preference for Intuition (N), and a modest but significant (-.26) negative correlation between the preference for Sensing (S) and ego development. No relationships between ego development and any of the other MBTI preferences were found – however, the sample size was small (N=64).

This finding of a positive relationship between ego development and MBTI Intuition (N) makes sense, given that N has been found to be highly correlated with Openness on the NEO-PI (Furnham 1996; Furnham, Moutafi & Crump, 2003, MacDonald, Anderson, Tsagarakis & Holland, 1994; McCrae & Costa, 1989) which, in turn, has been found to be correlated with ego level (Einstein and Lanning, 1998; Hogansen & Lanning, 2001; Kurtz & Tiegreen, 2005; Morros, Pushkar & Reis, 1998; Wright & Reise, 1997). It also accords with Manners and Durkin's (2000) conceptual framework for ego stage transition, in that N types have been found to have higher levels of autonomy, personal growth and positive relations compared to Sensing (S) types (Harrington & Loffredo, 2001) and to be open to the positive potential in people and situations and invest themselves enthusiastically in that potential (Bushe & Gibbs, 1990; Cranton, 2006). These qualities may positively influence both the types of potentially ego development-triggering life experiences a person is exposed to, and the ways in which such experiences are perceived and responded to. In contrast, people with a preference for Sensing (S) have been found to lack tolerance for ambiguity (Steckroth, Slocum & Sims, 1980) and to rely on routine (Cranton, 2006). Such factors might both mitigate against self-initiated exposure to novel life

experiences and predispose to resolving the disequilibrium created by such exposure by assimilation (and thus schema - and ego stage - stability). Sensing types, Cranton (2006) argued, might require immersion into an entirely new situation – such as a big change in environment or culture – in order to their shift habits of mind.

Other research on the dichotomous preferences suggests that a preference for Perceiving (P) as opposed to Judging (J) might have advantages for ego development. Associations between P and flexibility, imagination, adaptability, curiosity and openness to new ideas – all characteristics that are found to be more prevalent in higher stages of ego development - have been found (Myers et al., 2003). Perceiving has also been found to correlate with NEO-PI Openness (Furnham, 1996; MacDonald, Anderson, Tsagarakis & Holland, 1994; McCrae & Costa, 1989) - a factor that is correlated with ego development as noted above.

A correlation has also been found between the MBTI Feeling (F) preference and Agreeableness on the NEO-PI (Furnham, 1996; MacDonald, Anderson, Tsagarakis & Holland, 1994; McCrae & Costa, 1989) which, in turn, has been found to correlate with ego development (Einstein & Lanning, 1998; Hogansen & Lanning, 2001; Kurtz & Tiegreen, 2005). Those with a preference for Feeling tend to make decisions by weighing personal and group values and feelings. They are concerned with the human, as opposed to the technical, aspects of problems, as well as having a desire for warmth and harmony. Because they aim to maintain positive relationships, they tend to be responsive to the opinions and questions of others, trying to understand how they feel and entering into their frame of mind with empathy in order to see their perspective (Cranton, 2006). Those with a preference for Thinking (T) on the other hand, tend to rely on principles of cause and effect and to be objective and impersonal in making decisions (Myers et al., 2003).

Research into the groupings of the MBTI preferences has also revealed particular combinations that might be more or less likely to be associated with higher ego development. Research with ST types has found, for example, that they showed most risk avoidance when in operating in challenging environments – a factor that might lead to less learning from such environments, and possibly less likelihood of experiencing them - whereas SF, NF and NT types were more risk tolerant (Walck, 1996). NP types have been described as unconventional, independent spirits who seek out new challenges, new ideas and new people with a focus on exploring and experiencing the world and all of its potential (Myers et al., 2003). NP and NF types have also been found to be associated with higher creativity on various measures (Myers et al., 2003). These characteristics seem likely to enhance self-initiated exposure to, and learning from, novel life experiences (Myers et al., 2003). On the other hand, research with STJ's has found them to be resistant to change (Isachsen & Berens, 1988; Clancy, 1997). Because stability is very important to them, those with STJ preferences tend to focus on the status quo, seek order, dislike ambiguity and solve problems by relying on past experiences (Clancy, 1997). These factors seem likely to mitigate against seeking out novel life experiences and might also lead to the resolution of disequilibrium created by such experiences by assimilation (i.e. incorporating the new information into one's existing schemas – thus stability of the schemas). It is for this reason that Lang (1997) argued that leaders with NFP preferences might be required to cope with the rapid pace of change in organisations.

In spite of the limited research looking at the MBTI and ego development, the findings outlined above do provide data from which inferences can be made about how, within Manners & Durkin's (2000) conceptual framework, MBTI preferences and combinations of preferences might influence the types of life experiences a person is exposed to and/or the

way in which such experiences are perceived and responded to – and thus impact ego development.

In an effort to advance understanding of why and how development to higher ego levels might occur for some individuals and not others, we set out to explore whether particular personality preferences (as measured by the MBTI) were associated with higher levels of development and whether particular personality preferences might act as inhibiting or facilitating factors in ego development for participants involved in leadership development programs that have the potential to trigger such growth. This research is part of a larger study that has investigated the efficacy of community leadership programs (CLPs) in triggering ego development (Vincent, Ward & Denson, 2013). Although CLPs have not been deliberately designed in terms of the framework for ego development developed by Manners and Durkin (2000), many fit this framework quite well in that they offer disequilibrating experiences that are interpersonal in nature, cognitively and emotionally engaging and challenging – as well as personally salient for the participants. CLPs recruit participants from very diverse business, government and not-for-profit leadership positions, who apply voluntarily and who have demonstrated the potential to become future leaders within their broader communities. All such programs facilitate experiential exposure to major economic, environmental, social and cultural issues affecting communities, countries and the globe and to the leaders at the forefront of these issues from a diversity of perspectives, sectors and industries. This often includes sessions such as working with the homeless, field trips to prisons, farms, indigenous communities and law courts, attending artistic performances and visiting businesses – as well as meetings with high level State officials, and visiting overseas dignitaries. Some programs also include very challenging outward-bound experiences and overseas field trips to developing countries, individual coaching and personal development components, team

building and community action learning projects. Program sessions are conducted under the Chatham House Rule to facilitate deeper disclosure. Although there are some differences in the structure and approach taken between CLPs, they generally describe themselves as taking participants out of their comfort zone, exposing them to aspects of society they would otherwise never experience and exploring and challenging values and beliefs. The types of experiences and activities that CLPs offer have the potential to be most disequilibrating for those at the last conventional stage of consciousness (Conscientious) because they begin to expose participants to the fundamental paradoxes in human nature, confront them with ambiguous challenges and invite them to face their discomfort with this, as well as focus them on their own mental habits and biases – all concerns that Cook-Greuter (1999) noted come to the fore in the post conventional stages. Most of the programs are run over a 10-month period from February to November each year.

This research aimed to utilise measures that were already in use in many of the programs and/or were non-threatening and quick and easy to explain and use.

Although this study should be regarded as exploratory, given that only one other study has considered the relationship between MBTI preferences and ego development (and then only indirectly), the following specific hypotheses were developed from the information and research about the characteristics of people with particular MBTI preferences (and groupings of preferences) outlined above. We also explored and/or controlled for effects of age, education and gender.

Specific hypotheses:

- Those with a preference for Intuition will score higher on ego development than those with a preference for Sensing at program entry (H1a) and will show greater change in ego development post-intervention (H1b).
- Those with a preference for Feeling will score higher on ego development than those with a preference for Thinking at program entry (H2a) and will show greater show greater change in ego development post-intervention (H2b).
- Those with a preference for Perceiving will score higher on ego development than those with a preference for Judging at program entry (H3a) and will show greater change in ego development post-intervention (H3b).
- NFP types will score higher on ego development than STJ types at program entry (H4a) and will show greater change in ego development post-intervention (H4b).

Although there were no hypothesised relationships between Extraversion-Introversion and ego development, given the lack of research utilising the MBTI in this area, analyses including E-I were undertaken for exploratory purposes, as were analyses of MBTI whole types.

Materials and Methods

Participants

A total of 374 participants were recruited for this study - 337 from 11 community leadership programs (CLPs) around Australia and 37 from two non-academic (but university-run) professional management programs (the latter serving as controls for another part of this research). Sample size was restricted by the number of programs prepared to participate in the research and the number of people within the latter who agreed to participate. Overall, 96% of participants in the 13 programs (N=390) were tested at the commencement of their programs.

Ninety percent of these (n=335) participated in the final testing session at the end of their program.

Sixty-one percent of participants came from programs located in the metropolitan regions of major cities, and the remainder from programs in regional Australia. Fifty percent were female. Age ranged from 18 - 61 with a mean age of 40 (SD = 7.78). All spoke fluent English but for 6% this was not their first language. Four percent of the sample identified as Australian Aboriginal or Torres Strait Islander. As most participants recruited for the study were in positions of leadership, it is not surprising that the sample was highly educated, with 75% having completed a university degree, 26% having postgraduate qualifications at Masters or PhD level and only 6% not having completed high school. The average education level attained was a university undergraduate degree.

Measures

The Washington University Sentence Completion Test (WUSCT).

The WUSCT has been described as the most extensively validated projective technique for assessing personality (Lilienfeld, Wood & Garb, 2000, p. 56). It was first published in 1970 (Loevinger & Wessler, 1970; Loevinger, Wessler & Redmore, 1970) and revised in 1985 (Loevinger, 1985) and in 1996 (Hy & Loevinger, 1996). It has been used in hundreds of studies and administered to many thousands of people (Cohn & Westenberg, 2004). The premise of the test is that meaning is created and communicated through language and a person's choice of sentence content and structure models the way they see the world (Cook-Greuter, 1999). Respondents complete a series of 36 sentence stems selected for eliciting various aspects of ego development. Responses are scored using a detailed scoring manual (Hy & Loevinger, 1996) and combined using ogive rules to place the respondent in one of the eight stages of ego development. We utilised the ogive rules modified by Cook-Greuter (1999); they have higher

cut-off numbers for assigning high-end ego scores (E7 and above). Test forms for men and women are identical apart from a change in personal pronoun to make stems personally relevant. The test can be split in half to produce two abbreviated versions to prevent the measurement error effects found in repeated use of the full test (Redmore & Waldman, 1975). The most recent version of the test is Form 81. It served as the basis for the revised scoring manual published by Hy & Loevinger (1996).

Research has provided substantial support for the reliability of the WUSCT (Loevinger, 1979; Manners & Durkin, 2001). High inter-rater reliability has consistently been found in studies involving a range of populations. Using the item sum score, Loevinger and Wessler (1970) reported a Cronbach's alpha of .91 and this has been supported in several subsequent studies (Manners & Durkin, 2001). High and significant correlations between the two split halves of the forms have been found, with a similar correlation between each half and the 36-item version (Novy & Francis, 1992; Novy, Blumentritt, Nelson & Gaa, 1997). Although the uniqueness of ego development theory and measurement have made it hard to find appropriate alternative measures with which to compare it for construct validity, those studies that have compared the WUSCT with other measures of personality development have found that it compared favourably (Manners and Durkin, 2001).

Hy and Loevinger (1996) argued for the use of overall ego stage (a categorical measure) rather than item sum in research using the WUSCT. However, to allow the use of more powerful statistical techniques, both ego stage and item sum scores were analysed in this study and will be reported as appropriate.

The Myers Briggs Type Indicator (MBTI).

The MBTI Self-Scorable Form M is a self-report instrument where the respondent selects one of two options for each of 93 items to identify his or her preferences (and preference

clarity scores) on the four dichotomies outlined earlier. A respondent is assigned one of 16 possible 'type' classifications based on their preferences.

A review of the psychometric properties of the MBTI and its reliability and validity was undertaken by Gardner and Martinko (1996) and found to be generally satisfactory. Capraro and Capraro's (2002) meta-analytic reliability study examined the variability of measurement error in multiple administrations of the MBTI. Although there was some variability, they reported strong internal consistency and test-retest reliability. Cronbach's Alpha was computed on more than 10,000 participants and results ranged from .74 (TF) to .84 (SN). They also found test-retest coefficients to be stable over time (ranging from 1 week to 2.5 year intervals). Myers et al. (2003) reported more recent data on the psychometric properties of Form M. They found the split-half reliabilities of continuous scores for numerous samples generally exceeded .91 for each scale and test-retest reliability correlations range from .83 to .94 for a 4 week period. Test-retest reliabilities of continuous scores were calculated for different ranges of the preference clarity and correlations ranged from .99 to .93 for each scale with high preference clarity but were much lower (from .22 to .46) for the lowest preference clarity scores.

Extensive evidence of criterion-related validity is provided by type distribution tables which reveal differing proportions of types across occupations that are consistent with type theory. In addition, numerous studies have reported correlations between the scales of the MBTI and various personality, academic and interest matters (Gardner & Martinko, 1996; Myers et al., 2003). Although at the present time the key structural assumptions of type theory and the way in which the MBTI is assumed to operationalise them remain in dispute, to be consistent with type theory Myers et al. (2003) suggest using preference categories, combinations of

preference categories and whole types as independent variables – which is how they were utilised in the current study.

Procedure

Participants gave informed consent to take part in the study. They completed the WUSCT (first 18 stems) and MBTI on program entry and the WUSCT (second 18 stems) on program exit (this was at 10 months for 9 of the programs, with one program finishing at 24 months, one at 16 months and two at 12 months). Due to funding limitations, all WUSCT protocols were scored by a single trained scorer. Scoring of 67 of the protocols was checked by another expert scorer who had graduated from the extensive sentence completion test scoring certification course run by Cook-Greuter. The proportionate agreement on overall protocol ego level was 93%, with a difference of one ego stage between scorers in only 7% of the protocols (Kappa = 0.79, $p < .0005$).

Missing data and assumption checks

Missing data for education level (2.9%) and age (1.6%) were treated with pairwise deletion in the analyses, resulting in different sample sizes for analyses with these variables included. Preliminary checks were conducted to ensure there were no violations of any of the assumptions of the statistical tests undertaken.

Results and Discussion

Distribution of ego levels and MBTI preferences in the sample

The item sum on the WUSCT (half protocol) for participants at program entry ranged from 78 to 126 ($M = 99.24$; $SD = 8.82$). Ego levels ranged from E4 (Conformist) to E8 (Autonomous). The frequencies of these ego level categories are reported in Table 3.2. The distribution of ego levels in the group was similar to that reported in recent research with adults in management

(Cook-Greuter, 2004). T-tests found no significant difference ($p < .05$) in the item sum scores for females ($M = 99.87, SD = 9.31$) and males ($M = 98.62, SD = 8.29$) or in the ogive scored ego levels for females ($M = 6.03, SD = .70$) and males ($M = 5.94, SD = .61$).

Table 3.2: Distribution of Ego Stage at Program Entry

<i>Category</i>	<i>Frequency</i>	<i>Percent</i>
E4: Conformist	7	1.9
E5: Self-aware	57	15.2
E6: Conscientious	252	67.4
E7: Individualistic	52	13.9
E8: Autonomous	6	1.6
Total	374	100.0

The distribution of MBTI preferences and 16 whole MBTI types in the current sample is shown in Table 3.3. The preference distributions are very similar to recently published data for a large sample of employed Australians (Schaubhut & Thompson, 2009). The type distributions are similar to those found among leaders in a US sample of almost 123,000 (Richmond, 2008).

Preliminary analyses – the effects of age and education

The effect of age and education was investigated in preliminary analyses because research has found modest correlations between ego development and age and education in adult samples (Cohn, 1998; Manners & Durkin, 2001) as well as differences in educational achievement between the various MBTI dichotomous preferences (particularly S-N – with N being associated with higher educational achievement) and whole MBTI types (Furnham et al. 2003; Myers et al. 2003). Education level was coded as an ordinal scale. A small positive

Table 3.3: Distribution of MBTI preferences and types and means and standard deviations for WUSCT item sum by preference/type on program entry and exit and education level

MBTI Frequencies – full sample			MBTI Frequencies - females		MBTI Frequencies - males		Education– full sample	WUSCT Item Sum – full sample		WUSCT Item Sum - females		WUSCT Item Sum - males	
Preference/ Type	Time 1 (percent)	Time 2 (percent)	Time 1 (percent)	Time 2 (percent)	Time 1 (percent)	Time 2 (percent)	Mean (SD) Time 1	Mean (SD) Time 1	Mean (SD) Time 2	Mean (SD) Time 1	Mean (SD) Time 2	Mean (SD) Time 1	Mean (SD) Time 2
Extraversion	216 (57.8)	198 (59.1)	119 (55.1)	109 (55)	97 (44.9)	89 (45)	6.25 (1.60)	98.80 (8.84)	102.49 (10.07)	99.91 (9.36)	103.97 (10.35)	98.08 (8.13)	100.67 (9.46)
Introversion	158 (42.2)	137 (40.9)	68 (43.0)	54 (39.4)	90 (57.0)	83 (60.6)	6.35 (1.55)	99.71 (8.73)	103.85 (10.45)	99.79 (9.27)	104.37 (9.81)	99.20 (8.46)	101.86 (10.80)
Sensing	185 (49.5)	160 (47.8)	88 (47.6)	73 (45.6)	97 (52.4)	87 (54.4)	6.00 (1.62)	96.56 (7.43)	99.42 (9.61)	96.67 (7.53)	100.47 (9.37)	96.62 (7.82)	99.43 (9.61)
Intuition	189 (50.5)	175 (52.2)	99 (52.4)	90 (51.4)	90 (47.6)	85 (48.6)	6.58 (1.49)	101.77 (9.27)	105.58 (9.89)	102.71 (9.83)	107.06 (9.84)	100.78 (8.28)	104.01 (9.76)
Thinking	225 (60.2)	205 (61.2)	100 (44.4)	89 (43.4)	125 (55.6)	116 (56.6)	6.47 (1.45)	99.02 (8.52)	102.27 (10.52)	99.99 (9.14)	103.42 (10.58)	98.51 (8.17)	101.39 (10.43)
Feeling	149 (39.8)	130 (38.8)	87 (58.4)	74 (56.9)	62 (41.6)	56 (43.1)	6.02 (1.73)	99.44 (9.22)	103.22 (9.73)	99.72 (9.54)	104.93 (9.60)	98.84 (8.59)	100.96 (9.51)
Judging	199 (53.2)	175 (52.2)	111 (55.8)	94 (53.7)	88 (44.2)	81 (46.3)	6.48 (1.49)	99.44 (8.11)	102.51 (9.95)	100.18 (8.95)	103.32 (10.03)	98.59 (7.05)	101.58 (9.83)
Perceiving	175 (46.8)	160 (47.8)	76 (43.4)	69 (43.1)	99 (56.6)	91 (56.9)	6.08 (1.66)	98.89 (9.55)	102.77 (10.53)	99.41 (9.85)	105.17 (10.28)	98.65 (9.28)	100.96 (10.41)
ENFJ	16 (4.3)	15 (4.5)	-	-	-	-	6.53 (1.41)	105.31 (7.14)	110.60 (10.74)	-	-	-	-
ENFP	39 (10.4)	34 (10.2)	-	-	-	-	6.00 (1.65)	100.74 (9.28)	105.38 (8.50)	-	-	-	-
ENTJ	25 (6.7)	24 (7.2)	-	-	-	-	7.00 (1.41)	103.04 (7.84)	104.13 (10.02)	-	-	-	-
ENTP	39 (10.4)	38 (11.3)	-	-	-	-	6.62 (1.30)	100.74 (9.54)	104.21 (10.63)	-	-	-	-
ESFJ	26 (7.0)	23 (6.9)	-	-	-	-	6.04 (1.66)	97.38 (7.40)	101.87 (8.65)	-	-	-	-
ESFP	13 (3.5)	13 (3.9)	-	-	-	-	4.62 (1.66)	94.08 (7.48)	94.08 (7.11)	-	-	-	-
ESTJ	41 (11.0)	35 (10.4)	-	-	-	-	6.08 (1.51)	96.39 (8.32)	99.54 (10.22)	-	-	-	-
ESTP	16 (4.3)	15 (4.5)	-	-	-	-	6.25 (1.57)	92.81 (6.08)	96.93 (7.69)	-	-	-	-
INFJ	10 (2.7)	8 (2.4)	-	-	-	-	6.70 (1.70)	102.00 (12.04)	104.62 (5.60)	-	-	-	-
INFP	16 (4.3)	14 (4.2)	-	-	-	-	5.43 (1.55)	99.37 (10.54)	101.00 (10.80)	-	-	-	-
INTJ	19 (5.1)	18 (5.4)	-	-	-	-	7.42 (.90)	102.37 (8.86)	104.94 (9.56)	-	-	-	-
INTP	26 (7.0)	25 (7.5)	-	-	-	-	6.96 (1.31)	103.38 (9.79)	110.20 (9.37)	-	-	-	-
ISFJ	18 (4.8)	15 (4.5)	-	-	-	-	7.06 (1.11)	100.06 (5.17)	105.20 (8.60)	-	-	-	-
ISFP	10 (2.7)	7 (2.1)	-	-	-	-	5.11 (2.47)	91.90 (10.93)	96.14 (9.67)	-	-	-	-
ISTJ	45 (12.0)	38 (11.3)	-	-	-	-	6.07 (1.45)	97.53 (6.67)	99.24 (9.83)	-	-	-	-
ISTP	15 (4.0)	13 (3.9)	-	-	-	-	5.67 (1.45)	96.93 (5.32)	97.08 (9.99)	-	-	-	-
Total	374	335					6.29 (1.58)	99.24 (8.82)	102.64 (10.22)				

Note: Education coded as 4=completed high school, 5=vocational diploma, 6=undergraduate university degree, 7=university Honours degree or graduate certificate, 8=Master’s degree, 9=PhD/MD.

correlation between age and ego development (as measured by WUSCT item sum) was found, $r = .25$, $n = 368$, $p < .0005$ and a small positive correlation between education and ego development was also found, $r = .24$, $n = 363$, $p < .0005$. There was no significant difference in education level between those with a preference for Extraversion or Introversion. However, education level was significantly higher (although the effect sizes - eta squared - were small) in participants with preferences for Intuition compared with Sensing ($t(361) = -3.57$, $p = .0005$ (two-tailed), eta squared = .03), Thinking compared with Feeling ($t(361) = 2.65$, $p = .008$ (two-tailed), eta squared = .02) and Judging compared with Perceiving ($t(361) = 2.42$, $p = .02$ (two-tailed), eta squared = .02).

Differences in education between the MBTI whole types at program entry were investigated using a one-way between groups analysis of variance. There was a significant difference for the groups ($F(15, 347) = 4.22$, $p = .0005$) with a large effect size (eta squared = .15). Post-hoc comparisons using the Tukey HSD test indicated that the mean education level for those classified as INTJ was significantly higher than those classified as ISFP, ESFP and INFP. In addition, those classified as ESFP had significantly lower education than those classified as ISFJ, INTP, ENTP and ENTJ. There was no difference in education between STJ types (ESTJ and ISTJ) and NFP types (ENFP, INFP). The results for INTJ and ESFP are consistent with previous research which found that NT types are the highest achievers in education and SP types are the lowest (Myers et al., 2003; Woodruff & Clarke, 1993). There is a mismatch between the learning style of SP types and traditional educational systems (Myers et al., 2003). Table 3.3 displays the means and standard deviations for education level for each MBTI dichotomous preference and each whole type at program entry.

The relationship between MBTI preferences and ego development

To test the hypotheses relating to single dichotomous personality preferences and ego development at program entry, four 2 by 2 between-groups analyses of covariance were conducted to compare males and females and the E-I, S-N, T-F and J-P MBTI groups (independent variables) on the WUSCT item sum at time 1 (dependent variable) after controlling for age and education (covariates). Table 3.3 shows the mean WUSCT item sum and standard deviation for each MBTI preference and by gender.

After adjusting for age and education there were no significant interaction effects of MBTI preferences and gender in any of the analyses. There were also no significant main effects for gender, Extraversion vs Introversion, Thinking vs Feeling or Judging vs Perceiving on the MBTI – thus Hypothesis 2a and 3a were not supported. There was a significant main effect for Sensing vs Intuition ($F(1, 353) = 20.98, p < .0005, \text{partial } \eta^2 = .06$). There was a small relationship between both age and education and the WUSCT item sum as indicated by partial eta squared value of .05 for both.

In order to clarify the relationship between ego development level and the Sensing and Intuition preferences, males and females were combined and divided into three groups according to their stage of ego development on program entry (time 1). As there were very small numbers of participants in the stages earlier than ‘Self-Aware’ or later than ‘Individualistic’, the program stages were collapsed into three categories - ‘Self-Aware or earlier’; ‘Conscientious’; ‘Individualistic or later’ - and a Chi-square test for independence was conducted. As expected, this indicated a significant association between the ego development category and a preference for Sensing or Intuition, $\chi^2(2, n = 374) = 30.26, p = .0005, \text{Cramers } V = .28$. Table 3.4 displays the counts and percentages of those with a preference for Sensing and those with a preference for Intuition in each ego development category within the sample. It

can be seen that 23.2% of participants with a preference for Sensing were in the ‘Self-Aware or earlier’ category on program entry compared to only 11.1% of those with a preference for Intuition. In contrast, only 5.9% of those with a preference for Sensing were in the ‘Individualistic or later’ category of ego development compared to 24.9% of those with a preference for Intuition.

Table 3.4: Results of Chi-square analysis exploring the association between ego stage on program entry and the MBTI Sensing/Intuition preference.

			MBTI Sensing	MBTI Intuition	Total
Ego stage on program entry	Self-Aware or earlier	Count	43	21	64
		% within ego category	67.2%	32.8%	100.0%
		% within S or N	23.2%	11.1%	17.1%
		% of Total	11.5%	5.6%	17.1%
	Conscientious	Count	131	121	252
		% within ego category	52.0%	48.0%	100.0%
		% within S or N	70.8%	64.0%	67.4%
		% of Total	35.0%	32.4%	67.4%
	Individualistic or later	Count	11	47	58
		% within ego category	19.0%	81.0%	100.0%
		% within S or N	5.9%	24.9%	15.5%
		% of Total	2.9%	12.6%	15.5%
Total	Count	185	189	374	
	% within ego category	49.5%	50.5%	100.0%	
	% within S or N	100.0%	100.0%	100.0%	
	% of Total	49.5%	50.5%	100.0%	

At the end of the programs, 29% of participants overall had shifted up one or more ego stages (this varied by individual program from 16% to 44% and is the subject of a forthcoming paper). To test the hypotheses relating to single dichotomous personality preferences and ego development at program exit (H1b, 2b and 3b), four 2 by 2 between-groups analyses of covariance were conducted to compare males and females and the E-I, S-N, T-F and J-P MBTI

groups (independent variables) on the WUSCT item sum at time 2 (dependent variable) after controlling for WUSCT item sum at time 1, age and education (covariates). Table 3.3 shows the mean WUSCT item sum and standard deviation for each MBTI preference overall and by gender at the end of the program (time 2).

After adjusting for WUSCT item sum at time 1, age and education, there were no significant interaction effects of MBTI preferences and gender in any of the analyses. There were no significant main effects for Extraversion vs Introversion, Thinking vs Feeling or Judging vs Perceiving on the MBTI. There was a significant main effect for Sensing vs Intuition ($F(1, 315) = 6.76, p = .01, \text{partial eta squared} = .02$). There was also a significant main effect for gender ($F(1, 315) = 6.90, p = .009, \text{partial eta squared} = .02$) with females being more likely to have increased on the WUSCT item sum. There was no significant relationship between the WUSCT item sum at time 2 and age, and only a very small relationship between education (partial eta squared value of .03) and WUSCT item sum at time 2.

However, because the WUSCT item sum is only an indicator of ego development and does not reflect whether or not a person has shifted an ego stage (it is possible for a person's WUSCT item sum to increase significantly without him/her actually changing ego stage, or for the item sum to stay the same when a stage change has occurred) a new variable was created, categorising participants according to whether, at the end of the program, they had increased a stage or not. A series of Chi-square tests for independence was carried out to explore associations between the MBTI variables and gender with the ego stage change variable.

There were no significant associations between E or I, T or F and J or P and ego stage change. However, there was a significant association with Sensing vs Intuition ($\chi^2(1, n = 335) = 3.99, p = .05, \text{phi} = .12$) and for gender ($\chi^2(1, n = 335) = 5.56, p = .02, \text{phi} = -.14$). Table 3.5

displays the counts and percentages for the latter analyses. It shows that participants with a preference for Intuition were more likely to have increased an ego stage at the end of the program (34% of those with a preference for Intuition compared with 24% of those with a preference for Sensing). It also shows that female participants were more likely to have increased an ego stage at the end of the program (35.5% of females as opposed to 26.3% of males). Of those participants who increased an ego stage, 61.2% had a preference for Intuition and 59.2% were female.

Table 3.5: Results of Chi-square analysis exploring the association between ego stage increase on program exit, the MBTI Sensing/Intuition preference and gender.

			Ego stage change category		
			No ego stage increase	Ego stage increase	Total
MBTI preference	Sensing (S)	Count	122	38	160
		% within S or N	76.3%	23.8%	100.0%
		% within Change Category	51.5%	38.8%	47.8%
		% of Total	36.4%	11.3%	47.8%
	Intuition (N)	Count	115	60	175
		% within S or N	65.7%	34.3%	100.0%
		% within Change Category	48.5%	61.2%	52.2%
		% of Total	34.3%	17.9%	52.2%
Total	Count	237	98	335	
	% within S or N	70.7%	29.3%	100.0%	
	% within Change Category	100.0%	100.0%	100.0%	
	% of Total	70.7%	29.3%	100.0%	
Gender	Female	Count	105	58	163
		% within Gender	64.4%	35.6%	100.0%
		% within Change Category	44.3%	59.2%	48.7%
		% of Total	31.3%	17.3%	48.7%
	Male	Count	132	40	172
		% within Gender	76.7%	23.3%	100.0%
		% within Change Category	55.7%	40.8%	51.3%
		% of Total	39.4%	11.9%	51.3%
Total	Count	237	98	335	
	% within Gender	70.7%	29.3%	100.0%	
	% within Change Category	100.0%	100.0%	100.0%	
	% of Total	70.7%	29.3%	100.0%	

The associations between a preference for Intuition on the MBTI and higher ego development on program entry and greater ego development during the program are consistent with previous research, as well as research that has found a correlation between the MBTI Intuition preference and Openness to Experience factor on the NEO-PI – the latter also being positively correlated with ego development. These findings accord with Manners and Durkin’s (2000) conceptual framework for ego stage transition in which they argue that personality characteristics such as openness to new experiences may influence the types of life experiences a person is exposed to (proactive interaction) and the way in which such experiences are perceived and responded to (reactive interaction).

Given the results of previous research cited in section 1, it is somewhat surprising that no relationships between the preferences for Perceiving or Feeling and ego development were found in the current research. However, much of the previous research relating NEO-PI factors with ego development was undertaken with student samples in which a wider range of ego development stages were represented – including many of the early stages. Participants in the current study were, in general, mature adults in leadership roles, with a much narrower range of ego stages represented – and these being restricted to the conventional and later stages. Apart from the statistical problems associated with a truncated range of ego-stages, it may also be the case that personality preferences as measured by the MBTI have a weaker association with ego development in older adults –especially those who have achieved leadership roles. This is because the MBTI measures only the underlying personality preference, not the individual’s development outside this preference. Myers et al. (2003) discuss the emergence of the non-preferred functions at midlife and beyond – whereby people appear to be naturally motivated to complete their personalities by developing their non-preferred functions (for example, the deliberate development of Feeling skills by a person with a preference for

Thinking). Arguably many of those who have reached positions of leadership and maturity (and perhaps especially those volunteering to participate in community leadership programs, as in the current sample) will have recognised the strengths and weaknesses of their innate personality preferences and worked to address the weaknesses by developing skills, and exposing themselves to experiences, that are outside of their natural preferences. In doing so, they may have exposed themselves to the types of experiences that trigger ego development – thus making it harder to discern a relationship between natural personality preferences and ego development in such a sample.

Although beyond the scope of this paper, the finding of a female advantage in ego development during the course of the program is interesting and, as far as we know, has not been found before. Although a meta-analysis of gender differences in the course of personality development found a female advantage in school students, this declined substantially among college-age adults and disappeared entirely among older men and women (Cohn, 1991). The lack of a gender difference in ego development on entry in the current study is consistent with this.

The relationship between NFP and STJ types and ego development

In order to test the hypothesis that NFP types would score higher on ego development than STJ types at program entry (H4a), an independent-samples t-test was conducted to compare the WUSCT item sum scores at program entry for STJ types ($N = 86$) with NFP types ($N = 55$). There was a significant difference in scores for STJ types ($M = 96.99$, $SD = 7.48$) and NFP types ($M = 100.35$, $SD = 9.58$); $t(95.06) = -2.20$, $p = .03$ (two-tailed). However, the magnitude in the differences in the means (mean difference = -3.36 , 95% CI: -6.38 to $-.33$) was small (eta squared = $.03$) – and smaller than for the comparison between Sensing and Intuition types, indicating that the inclusion of TJ and FP preferences moderated the effect rather than

strengthened it. This was borne out by the lack of support for the hypothesised association between STJ and NFP types and ego stage change during the program (H4b) – whereas (as noted above), those with a preference for Intuition, when analysed alone, were more likely to have increased an ego stage at the end of the program when compared to Sensing types.

The relationship between ego development and MBTI whole types

Table 3.3 displays the means and standard deviations on the WUSCT item sum for each of the MBTI whole types at program entry and exit. An exploratory one-way between-groups analysis of variance examined the impact of MBTI whole type on ego development, as measured by the WUSCT Item Sum. Males and females were combined because there were too few participants in some whole type groupings to analyse them separately. There was a statistically significant difference at the $p < .05$ level in WUSCT Item Sum scores for the 16 MBTI types: $F(15, 358) = 3.85, p < .0005$. The effect size, calculated using eta squared, was .14 (large). Post hoc comparisons using the Tukey HSD indicated that the mean WUSCT Item Score for participants of ISFP type ($M = 91.90, SD = 10.93$) and ESTP type ($M = 92.81, SD = 6.08$) was significantly lower than that for participants of ENFJ type ($M = 105.31, SD = 7.14$), ENTJ type ($M = 103.04, SD = 7.84$) and INTP type ($M = 103.38, SD = 9.79$). In addition, the mean WUSCT Item Score for participants of ESTJ type ($M = 96.39, SD = 8.32$) and ESFP type ($M = 94.08, SD = 7.48$) was significantly lower than that for participants of an ENFJ type (see above). All of the latter comparisons were significant at $p < .03$. The preliminary analyses of educational level differences between MBTI whole types did not show any differences between any of the latter types. Again, it should be noted that all differences were between types with a preference for Sensing versus Intuition. However, not all whole types including a preference for Sensing were significantly lower on ego development and vice versa – so as mentioned above, perhaps some of the other preferences included in the whole type combinations act as moderators in

particular combinations. Although there was no discernible pattern of possible moderating preferences in these whole types from which to draw any such conclusions, this is consistent with the finding of Myers et al. (2003) that "...there are characteristics of whole types that are not predictable from knowledge of the individual preferences alone or from simple additive models of the preferences" (p. 219).

A one-way between groups analysis of variance was conducted to explore the impact of whole MBTI type on the change in WUSCT item sum at program exit. This was not statistically significant. The analyses of whole types were weakened by the smaller numbers included in each category and should be repeated with much larger samples in future research.

Conclusions

As only one study utilising a small sample has previously examined the relationship between personality preferences as measured by the MBTI and ego development (Bushe & Gibbs, 1990), the current study set out to fill this void using a much larger sample and with the addition of a component that explored the relationship between MBTI preferences and change in ego development following an intervention.

The current research has reinforced the finding from one previous study that Intuition, as measured by the MBTI, is associated with higher ego development. In addition, it found something that has not been demonstrated before - that those with a preference for Intuition were more likely than Sensing types to have increased an ego stage at the end of a leadership development program. Although the effect sizes of these analyses were modest, the findings do have some practical relevance for those seeking to design programs that trigger ego development for Sensing types. Such programs need to provide a holding environment in which Sensing types can, perhaps over a longer time span than is required for Intuitive types,

be exposed to experiences that are designed to help them develop tolerance for ambiguity and lack of routine, that expose them to new concepts on multiple levels, that immerse them in entirely new situations and expose them to alternative perspectives and values in order to challenge them out of their comfort zones and shift their habits of mind (yet do not push them beyond the limits of their tolerance too rapidly).

When interpreting the results of the present study, several limitations warrant consideration. Firstly, the restriction of the measurement of personality to the MBTI – although deliberate in this case (to ensure that research participation was relatively simple and usefully aligned with the typical content of the leadership programs) limits the strength of our conclusions. Although the sample size was large and relatively similar to other published managerial samples in terms of the spread of ego stages and MBTI preferences, the results are not necessarily generalisable to the adult population as a whole. For example, the lack of representation of ego levels below Self-Aware in the current sample means that it is not possible to draw any conclusions about whether the finding in relation to Intuition and ego development is generalisable to those at earlier stages of development. Finally, although the sample size was large, it was not large enough to obtain sufficient samples of all of the 16 MBTI whole types. The results of these analyses should thus be treated as preliminary and repeated with larger samples.

Overall, our results provide some reassurance to those wishing to enhance their ego development, and to those designing and facilitating programs that help them to do so. Intuitive types appear to have a slight advantage, but in general personality preferences, as measured by the MBTI, do not appear to be a large factor in influencing ego development – at least among mature aspiring community leaders. This invites the question as to why a significant number of participants - 29% overall with a range of 16% to 44% depending on the

particular program (Vincent et al., 2013) -transitioned to a higher stage of ego development during the course of the intervention programs in this study, but the others did not. Future research should continue the search to identify the characteristics of people who are likely to mature, in ego development terms, during such interventions – and through adulthood in general (including further exploration of the finding of the female advantage in this study). It might also usefully explore whether those who experience such maturation actually become better leaders in their communities.

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Chapter 4: Study 2 – Promoting post-conventional consciousness in leaders: Australian community leadership programs

Statement of Authorship

By signing the Statement of Authorship, each author certifies that their stated contribution to the publication is accurate and that permission is granted for the publication to be included in the candidate's thesis.

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Preface to study 2

The study in the preceding chapter found evidence in support of the proposal in Manners' and Durkin's (2000) framework, that personality factors may facilitate or inhibit consciousness development. Not only was a preference for MBTI Intuition associated with significantly higher consciousness development on entry into the leadership programs included in the study, it was also associated with greater consciousness development during the programs when compared to those with the opposite preference (Sensing). The latter does not appear to have ever been demonstrated before. It suggests that these preferences may operate to enhance or constrain consciousness development and therefore should present an important consideration in the design and delivery of programs to promote such development, particularly given that Sensing types are in the majority world-wide (Schaubhut & Thompson, 2009).

As articulated in Chapter 2, another aspect of the framework for the processes involved in consciousness development articulated by Manners and Durkin (2000) was that in order to trigger such development, life experiences must have particular properties – namely offering challenge to the individual's current stage of consciousness, as well as being personally salient, interpersonal in nature and emotionally engaging and challenging (but amenable to positive interpretation). These specifications provide a basis for the development of programs to promote consciousness development, and have been supported in a single intervention study (Manners et al. 2004). However, the latter was designed to promote development only within the conventional tier (from Expert to Achiever) and did not include participants at post-conventional stages. In addition, it did not consider personality factors or preferences as possible mediators of development.

The following quasi-experimental study was designed to provide a further test for Manners' and Durkin's (2000) framework in relation to the properties of interventions to

promote consciousness development, as well as to address the need for more research into post-conventional development (McCauley et al. 2006). In addition, it set out to further explore the relationship between consciousness development and the MBTI preferences for Sensing and Intuition found in the previous study.

Abstract

This study explored the impact on consciousness development of participating in either standard or enhanced community leadership programs (CLPs) in Australia. Aligned with Manners' and Durkin's (2000) conceptual framework, CLPs offer experiences that are interpersonal, emotionally engaging, personally salient and structurally disequilibrating for later conventional consciousness stages. Enhanced CLPs include additional psychosocial challenges. Participants were 335 adults who took part in one of 4 standard CLPs, 7 enhanced CLPs and 2 (control) management programs. Modal program length was 10 months. Standard and enhanced CLPs were successful in facilitating consciousness development (as measured by the Washington University Sentence Completion Test – WUSCT) within the conventional stages. However, enhanced CLPs were significantly more successful in triggering post-conventional development, and specifically in those participants who had a preference for Sensing (as measured by the Myers Briggs Type Indicator – MBTI). Enhanced CLPs could provide a model for other development programs aimed at promoting post-conventional consciousness.

Keywords: Leadership development; Community leadership; Washington University Sentence Completion Test; Ego development; Myers Briggs Type Indicator.

Introduction

Humanity clearly needs to come to terms with the complexity and urgency of our adaptive global and local challenges. These challenges involve multiple systems and threats in which the solution to one part of the problem may unintentionally exacerbate another (Heifetz, Grashow & Linsky, 2009). Adaptive issues cannot be solved with technical expertise – no matter how ‘state-of-the-art’. Nor can they be solved with charismatic or single minded leadership – no matter how alluring these qualities may seem in times of uncertainty. As Kegan (1994) noted “The expectations upon us [in modern life]...demand something more than mere behaviour, the acquisition of specific skills, or the mastery of particular knowledge. They make demands on our minds, on *how* we know, on the complexity of our consciousness” (p. 5). We are, as he asserted, ‘in over our heads’ with the kinds of adaptive challenges we are facing today; our ‘conventional’ consciousness is not geared to respond effectively.

Once the purview of education and counselling programs, adult constructive development theory and research has recently begun to impact the field of management and leadership (Laske, 2003; McCauley, Drath, Palus, O’Connor & Baker, 2006). Constructive developmental theory focusses on how individuals construct their understanding of self (consciousness) – the principles by which they make meaning. As meaning-making capacity expands, so does the capacity to cope with complexity and ambiguity, to self-reflect, to collaborate more effectively with diverse others, view problems holistically and engage with them courageously and creatively (Cook-Greuter, 1999, 2004). Increasingly, these capacities are seen as the drivers of success in leadership (Australian Workforce and Productivity Agency, 2013).

Constructive developmental theorists argue that resolution of the 21st-century adaptive challenges we are facing in our organisations, communities and at a global level, requires a fundamental mind shift in leadership; not just an alternative set of views about the world, but

an alternative way of arriving at such views (Donovan, 1997). This new way of thinking and comprehending must transcend the interests of any one individual, group or country (Hewlett, 2004). It must recognise the ways in which our realities are constructed and integrate multiple perspectives and multiple systems to challenge existing ways of thinking (Paulus & Drath, 1995). It must take a long-range perspective, be willing to experiment, and have the high tolerance for ambiguity and uncertainty that will be required for generating alternative futures. These are the capacities that have been found to evolve at post-conventional levels of development (Cook-Greuter, 1999; Cook-Greuter & Miller, 1994; Hewlett, 2004; Kegan 1994). Now more than ever, the world needs leaders who operate from post-conventional consciousness because of their transformational capacity, agility, creativity, flexibility and mature insight (Barker & Torbert, 2011; Cook-Greuter, 2004; Joiner & Josephs, 2007; Kegan & Lahey, 2009; Rooke & Torbert, 2005).

This research explored whether development to post-conventional consciousness could be facilitated within Australian community leadership programs. Such programs are similar to those run by the American Leadership Forum and the UK's Common Purpose. There are currently around 18 such programs operating out of capital cities and regional centres around Australia with a combined total of more than 6000 graduates. Attracting diverse groups of emerging and established leaders, such programs may be an important way in which to assist a broad range of individuals to develop their consciousness and to create a 'snowball' effect of higher level thinking that, as Donovan (1997) suggested, is dispersed throughout the institutions, systems and structures of our societies and eventually lifts everyone's capacity. They may also provide a model for the development of other programs aimed at supporting people to transform their current way of making sense of the world.

Background to the research

Loevinger's Theory of Ego Development

As we have discussed in more detail previously (Vincent, Ward & Denson, 2013), Loevinger's constructive developmental theory of ego development (now often referred to as 'consciousness development') has been described as one of the most comprehensive constructs in the field of developmental psychology (Westenberg & Block, 1993). It provides a framework for understanding the growth in an individual's way of constructing meaning through the lifespan which is comprised of an invariant sequence of stages (Loevinger & Blasi, 1976; Loevinger, 1987). Each shift in stage offers greater cognitive complexity, a more integrated perspective, greater self and interpersonal awareness, responsibility and personal autonomy, decreasing defensiveness and increasing flexibility, reflection and skill in interacting with the environment (Cook-Greuter, 1999, 2004). Identity expands from egocentric to 'sociocentric' to 'worldcentric' and beyond (Wilber, 2000).

As is shown in Table 4.1, the stages of consciousness development are divided into pre-conventional, conventional and post-conventional tiers. The pre-conventional tier represents the period in a person's life when cognitive and affective development have not yet reached levels at which the individual can fully function in conventional society. Based on their research, Miller and Cook-Greuter (1994) estimated that around 10% of the adult population in Western societies function within this tier. The three stages within the 'conventional' tier are where about 80% of adolescents and adults operate (Cook-Greuter, 2004; Miller & Cook-Greuter, 1994). This tier is characterised by the individual's adherence to conventional values, norms, beliefs and practices. In contrast, once an individual enters the stages of the third 'post-conventional' tier (around 10-20% of the population) he or she is able to recognise the constructed nature of reality and to critically examine, and intellectually step outside,

conventional norms, practices, values, beliefs and existing institutional structures. Adults operating from this tier have been found to have greater tolerance of paradox and ambiguity, to be able to think multi-systemically, and to anticipate and creatively adapt to changing contingencies and life circumstances (Cook-Greuter, 2004).

Torbert et al. (2004) adapted the work of Loevinger, producing a model of development that was intended to facilitate wider application of the theory. Called the 'Leadership Development Profile', its stages align with those of Loevinger, but have been given different labels. The descriptions of the stages relate to how they would manifest in individuals within an organisational context. Table 4.1 shows the features of the stages.

Several critical reviews of Loevinger's theory and its measurement tool, the Washington University Sentence Completion Test (WUSCT), have concluded that there is substantial empirical support for the conceptual soundness of consciousness development theory and the WUSCT (Cohn & Westenberg, 2004; Hauser, 1976; Loevinger, 1979; Manners & Durkin, 2001). Research into discriminant validity has found it to be sufficiently distinct from intelligence and from socioeconomic status (as indicated by demographic factors and level of education) (Manners & Durkin, 2001).

The relationship between consciousness development and age, intelligence and education

Cohn (1998) conducted a meta-analysis of 92 studies involving over 12,000 participants from a wide range of samples that had used the Washington University Sentence Completion Test (WUSCT) - the tool Loevinger developed to measure consciousness development. He was interested in understanding when most people cease to mature. He found correlations of .40 between age and consciousness level in adolescent samples from cross-sectional and

Table 4.1: Stages of Consciousness Development

TIER	STAGE	TYPICAL MANIFESTATIONS
PRECONVENTIONAL	(IMPULSIVE)	Dependent on others for control. Physical needs and impulses. Others understood in simple dichotomies (good and bad, clean and dirty etc). Rules poorly understood.
	OPPORTUNIST (SELF-PROTECTIVE)	Fragile self-control. Short time horizon (hours to days). Focus on concrete things. Deceptive, manipulative, exploitive. Preoccupied with staying out of trouble, not getting caught; externalising blame. Lacking long term goals and ideals. See life as a 'zero sum game'. Views luck as central. Rejects critical feedback. 4.3% found to be at this stage by Cook-Greuter, (2004).
CONVENTIONAL	DIPLOMAT (CONFORMIST)	Group-centred and imitates behaviour of high status group members/authority. Rules and norms accepted without question. What is conventional and socially approved is 'right' (although may also rigidly conform to some unconventional norms to fit in with a particular group). Preoccupation with reputation, social acceptance, appearance and material things. People (including the self) perceived in terms of stereotypes. Conceptually simple, 'black and white' thinking. Feelings understood at banal level. Use of clichés, favourite phrases and pre-fabricated jokes. One week to 3-month time horizon. 11.3% at this stage (Cook-Greuter, 2004).
	EXPERT (SELF-AWARE)	Distinction between self and group. Allows some modification of absolute rules, but stage is basically a later version of Diplomat. Concentrates on mastery of one or more particular crafts or disciplines. Desire to stand out, be unique. Perfectionist. Increased, though still limited, self-awareness and appreciation of multiple possibilities in situations. Relationships described in terms of feelings (not just actions). Self-critical but accepts external feedback only from acknowledged craft masters. Values decisions based on technical merit. Humour tends to practical jokes. Six month to 1-year time horizon. 36.5% at this stage (Cook-Greuter, 2004).
	ACHIEVER (CONSCIENTIOUS)	Self-evaluated standards. Achievement is highly valued. Reflective, responsible and empathic. Strives to improve the self. Thinking beyond personal concerns to those of society. Displays and perceives true conceptual complexity. Can see the broader perspective and can discern patterns. Principled morality. Mutuality in relationships. Self-critical. Welcomes behavioural feedback. One to 3-year time horizon. 29.7% at this stage (Cook-Greuter, 2004).
POSTCONVENTIONAL	INDIVIDUALIST (INDIVIDUALISTIC)	Heightened sense of individuality. Takes a relativistic perspective. Interested in own and others unique self-expression. Tolerant of self and others. May become a maverick. Awareness of inner conflicts and personal paradoxes, without a sense of resolution or integration. Values relationships over achievement. May provide less certainty and less firm leadership to followers as aware of the layers of assumptions and interpretations at work in current situation. Possible paralysis in decision-making. 11.3% found at this stage (Cook-Greuter, 2004).
	STRATEGIST (AUTONOMOUS)	Self-awareness in action. Intuitively recognises other and own stages and accesses all of these creatively to achieve desired outcomes. Reframes issues and seeks transformational solutions. Deepened respect for other people - their individuality and uniqueness and their need to find their own way/make their own mistakes. Relationships seen as interdependent rather than as dependent/independent. Tolerance for ambiguity and the recognition of paradoxes (including inner conflicts). Search for self-fulfilment/self-actualisation. Vivid expression of feelings. Witty existential humour. 4.9% found at this stage (Cook-Greuter, 2004).
	ALCHEMIST (CONSTRUCT AWARE/ INTEGRATED)	Self-actualising. Starts to see own thought and language habits and become aware of profound splits and paradoxes inherent in rational thought. Aware of ego defences for self-preservation. 'Peak experiences' or 'flow states' may be experienced. Often play key roles in many organisations at once. Intentional participation in the work of historical/spiritual transformation. 2.0% found at this stage (Cook-Greuter, 2004).

Adapted from Hy & Loevinger (1996), Manners & Durkin (2001), Cook-Greuter (1999; 2004), Marko (2006) and Torbert et al. (2004). Brackets indicate Loevinger's original stage names.

longitudinal studies, .13 in college-age adults in longitudinal studies and .04 in cross-sectional studies of adults. These findings, and more recent research reported by Truluck and Courtenay (2002) and Cook-Greuter (2004), support the hypothesis of Loevinger, Cohn, Bonneville, Redmore, Streich and Sargent (1985) that consciousness level stabilises for most individuals by early adulthood.

Many studies have found a low to moderate positive correlation between measures of intelligence and consciousness development (Cramer, 1999; Loevinger, 1979; Newman, Tellegen and Bouchard, 1998) with higher correlations between development stage and verbal fluency (Einstein & Lanning, 1998; Loevinger & Wessler, 1970; McCrae & Costa, 1980) and with cognitive functioning in the socio-emotional domain (Blanchard-Fields, 1986). Loevinger (Loevinger & Blasi, 1976; Loevinger, 1987) argued that cognitive development is necessary but not sufficient for consciousness development – the former providing the extent of the range of ‘possibilities’ for the latter, resulting in a wide range of IQ scores among those in the earlier stages of consciousness and a more restricted range of average to high IQ scores at the later stages. A meta-analysis by Cohn and Westenber (2004) provided support for this argument.

According to a review by Cohn (1998) there is typically a high correlation between education and stage of consciousness in school samples, but only a low to moderate correlation in adult samples. Miller (1994) reported on a study of 40 highly educated males (almost 2/3 had advanced academic or professional degrees and the remainder had attended college) between the ages of 28-57. He found only 5 scored at a post-conventional level of consciousness development and noted that this result provided evidence that higher levels of education and professional training do not guarantee movement into the post-conventional tier. At a ten-year follow up, he reported that WUSCT scores had remained relatively stable.

More recently however, Truluck and Courtenay (2002) found a significant positive relationship between educational level and consciousness development in a sample of older adults aged 55 and over, with a higher percentage of college graduates and postgraduates having reached the Individualist (first post-conventional) stage of consciousness. They concluded that educational attainment may influence consciousness development well into older adulthood.

The limitations of conventional consciousness

The findings of Cohn (1998) and Cook-Greuter (2004) that that the vast majority of adults stabilise at or below the Achiever level of consciousness, provide support for Kegan's (1994) assertion that human consciousness is often not geared to respond effectively to the adaptive challenges of today. The Achiever stage is well below the maximum potential for development identified by Loevinger's theory, and is consistent with the findings of stabilisation below the maximum potential identified in other areas of adult development, such as cognitive and moral development (Manners & Durkin, 2000).

People operating from Achiever consciousness are unlikely to be able to deal with complex adaptive challenges. Although as Cook-Greuter (1999) argued, this currently predominant conventional world view has "...produced the industrial revolution and evolved into the current global technology, which has solved many dire problems of humanity and created technological wonders unimaginable fifty years ago" (p13), Donovan (1997) has noted that it is also responsible for the major problems currently facing the planet because it is a limited and relatively short-term empirical-analytic mode of thinking "...well suited to calculating the means to attain predetermined ends, but deficient when it comes to more fundamental matters – such as determining what ends are to be pursued, and challenging the premises on which calculations proceed." (p26).

Consciousness development and its relationship to leadership capacity

Laske (2003), Eigel and Kuhnert (2005) and Strang and Kuhnert (2009) have equated consciousness development with the capacity to lead others. Similarly, the primary message of the work of Torbert et al. (2004) and of Kegan and Lahey (2009) is that a person's stage of consciousness influences his or her approach to the tasks of management and leadership, and that people who operate from later stages tend to be more effective managers and transformational leaders.

Research exploring the relationship between consciousness development and leadership performance is increasing, although the field is still in its infancy and many studies to date have suffered from small sample sizes and other problems (McCauley et al., 2006). Nevertheless, a growing body of recent research in this area is showing associations between increasing consciousness development and better leadership performance and organisational outcomes (Barker & Torbert, 2011; Bartone, Snook, Forsythe, Lewis & Bullis, 2007; Bushe & Gibbs, 1990; Brown, 2011; Guerette, 1986; Helsing & Howell, 2013; Joiner & Josephs, 2007; King & Roberts, 1992; Marrewijk & Were, 2003; McCauley et al., 2006; Merron, 1985; Merron, Fisher & Torbert, 1987; Rooke & Torbert, 1998; Torbert et al., 2004). Furthermore, although there is a vast body of literature associating leadership performance with personality (Zaccaro, Kemp & Bader, 2004), Strang and Kuhnert (2009) found that stage of consciousness development accounted for a unique component of the variance in 360-degree leadership performance ratings by peers and subordinates, beyond that which was accounted for by the Big Five personality dimensions.

Recently, Kegan and Lahey (2009) argued that efforts to develop leadership capacity should shift their focus from what Cook-Greuter (2004) has described as horizontal or lateral development – focusing on knowledge and competencies that expand and enrich a person's

current way of meaning-making – to much more powerful ‘vertical development’ which supports people to transform their current way of making sense of the world (shift their consciousness) so that they can take a broader perspective. Unfortunately however, it has only been in relatively recent times that researchers have begun to place attention on the factors that might facilitate progress to advanced stages of consciousness development (Manners & Durkin, 2000; Manners, Durkin & Nesdale, 2004; Marko, 2011; Pfaffenberger, 2005).

Promoting post-conventional consciousness development

Manners and Durkin (2000) developed a conceptual framework that identified the factors likely to be involved in the consciousness stage transition process in adulthood. This was based on Loevinger’s theoretical reflections and associated research – including studies of intervention programs that have been designed to promote consciousness development in adults (mostly within the conventional stages) - as well as theory and research into moral stage development and the processes involved in adult personality development. The framework represents consciousness stage transition as an accommodative restructuring of schemas in response to life experiences that are personally salient, interpersonal in nature, emotionally engaging and challenging (but amenable to positive interpretation) and that are disequilibrating for the person’s existing ways of seeing the world. In their model, development is influenced by the degree of exposure to such life experiences, along with dispositional personality traits that interact in complex ways to influence the likelihood of such exposure, and how the experiences are perceived and responded to (Vincent et al., 2013).

Manners and Durkin tested their conceptual framework using an intervention that targeted people at the Expert stage. It was specifically designed to be interpersonal in nature, structurally disequilibrating for people at that level, personally salient and emotionally engaging (Manners, Durkin & Nesdale, 2004). Their research utilised an experimental design

and found a significant increase in consciousness in participants who had taken part in the intervention, compared to no effect for those in a matched wait list control group.

Joiner and Josephs (2007), Rooke and Torbert (2005), and Torbert et al (2004) have described various reflective and attentional practices that have the potential to foster growth throughout the developmental process, regardless of the current level of consciousness, but we still know very little about what specific factors might foster growth at each of the different developmental stages (Bartone et al., 2007; McCauley et al., 2006). In particular, there is an absence of research into how movement to post-conventional levels of consciousness development might be facilitated by training, developmental programs or coaching. As McCauley et al. (2006) have noted, post-conventional growth is not part of normal development and so there are few social supports for it. Moreover, interventions designed to trigger growth at the conventional levels cannot be assumed to have the same effect at post-conventional levels. In order to promote the transition from conventional to post-conventional consciousness, developmental programs would presumably need to include experiences that exposed participants to the fundamental paradoxes in human nature, confronted them with ambiguous challenges and invited them to face their discomfort with this, as well as focusing their attention on their own mental habits and biases – all concerns that as Cook-Greuter (1999) noted, are prominent in the post-conventional stages.

Another gap in the research into facilitating consciousness development is the lack of consideration of the role of trait, state, environmental and sociocultural ‘readiness factors’ for such development (Palus & Drath, 1995). Although it is beyond the scope of this paper to cover all of the latter, a better understanding of how such factors may mediate the effect of interventions designed to trigger consciousness development could facilitate a more tailored approach (as opposed to ‘one-size-fits-all’) that could address the likely barriers to higher stage

development. As an example, we previously reported on a study in which we explored whether particular personality preferences and combinations thereof, as measured by the Myers-Briggs Type Indicator (MBTI), were associated with higher consciousness levels and whether particular personality preferences (and combinations of preferences) might act as inhibiting or facilitating factors in consciousness development (Vincent et al., 2013). We found that Intuition alone was associated with higher development on entry into community leadership development programs, as well as greater development throughout the course of the programs. As we have previously noted (Vincent et al., 2013) MBTI Intuition has also been found to be highly correlated with Openness on the NEO-PI (Furnham 1996; Furnham, Moutafi & Crump, 2003, MacDonald, Anderson, Tsagarakis & Holland, 1994; McCrae & Costa, 1989) which, in turn, has been found to be correlated with consciousness level (Einstein and Lanning, 1998; Hogansen & Lanning, 2001; Kurtz & Tiegreen, 2005; Morros, Pushkar & Reis, 1998; Wright & Reise, 1997).

That Intuition should be associated with higher consciousness development seems reasonable, because compared to people with a preference for Sensing, those with a preference for Intuition have been found to have higher levels of autonomy, personal growth and positive relations; to be more open to the positive potential in people and situations; and to invest themselves enthusiastically in that potential (Bushe & Gibbs, 1990; Cranton, 2006; Harrington & Loffredo, 2001). These qualities may positively influence both the types of potentially consciousness development-triggering life experiences a person is exposed to, and the ways in which such experiences are perceived and responded to. MBTI Intuition, may thus serve as an internal 'readiness' factor for consciousness development (Palus & Drath, 1995) and has also been associated with advancement to top executive ranks and career achievement (McCaulley, 1990, Zaccaro, 2001). We made some recommendations about how

the relative disadvantage for those with a preference for Sensing might be mitigated in leadership programs that aim to promote consciousness development (Vincent et al., 2013) and we proceeded in the current study, to investigate the distribution and impact of Intuition and Sensing preferences across the program groups.

Community Leadership Development Programs

As we have noted previously (Vincent et al., 2013) at the time of this study, Australian Community Leadership Programs (CLPs) did not incorporate constructive developmental theory as an organising framework or deliberately set out to promote consciousness development. However, close observation revealed that most actually fit Manners' and Durkin's (2000) framework for promoting conscious development quite well in that they offer potentially disequilibrating experiences that are interpersonal in nature, emotionally engaging and challenging, as well as being personally salient for participants. The current research was designed to find out whether CLPs do, in fact, promote consciousness development without specifically intending to do so.

Australian CLPs are typically run over 10 months from February to November with most including the equivalent of 2 to 3 full day sessions per month as well as multi-day retreats and field trips. All are currently run out of not-for-profit organisations established for this purpose, or through local chambers of commerce or 'committees for cities'. They recruit established and emerging leaders from very diverse business, government and not-for-profit organisations. Selection of participants is similar across all Australian CLPs. It is a competitive process involving completion of a written application and participation in an interview to assess suitability for inclusion. Candidates must have demonstrated above-average leadership capacity and a commitment to their community. They must also be supported by their employers to undertake the program and be open to learning and committed to increasing

their involvement in their community. Each program has a limit of between 24 and 40 participants (depending on the size of the region in which the program operates and available program resources).

Unlike other more mainstream leadership development programs in Australia, CLPs are uniquely focussed on facilitating their participants' exposure to major economic, environmental, social and cultural issues affecting their communities – and (under the Chatham House Rule) to the leaders at the forefront of these issues from a diversity of perspectives, sectors and industries. CLPs generally involve highly interactive and experiential sessions, some in environments that participants might otherwise never encounter. For example, participants may find themselves serving meals in a homeless centre, working with people with a disability to help place them in suitable work, talking to prisoners about their lives in a prison environment, sitting around a campfire with indigenous elders discussing the challenges facing such communities, walking the fields with a farmer, or sitting in on a murder, rape or drug trial in a law court. In addition, participants attend artistic performances, visit various businesses and public infrastructure projects, and meet with state and federal politicians and visiting dignitaries. Group debriefs generally follow all such sessions.

Experiential learning opportunities of this kind are likely to be disequilibrating for those at the conventional stages of consciousness development because the collaborative examination of complex and often ill-defined community issues from diverse perspectives (including the diversity of perspectives of the participants themselves) will raise awareness that problems can be viewed through different lenses, that such issues cannot be considered in isolation – they must be viewed within the context of the larger multiplicity of systems with which they interact, that authority cannot be relied upon to provide answers, there are no simple solutions and there can be different but equally valid ways to intervene (Heifetz, Grashow &

Linsky, 2009; Taylor, 2006; Valcea, Hamdani, Buckley & Novicevic, 2011). Ambiguous experiential challenges such as these also begin to expose participants to the fundamental paradoxes in human nature while highlighting their own mental habits and biases. In the program environment, away from their regular routines, roles and familiar circumstances, participants are more able to participate deeply in the reflective process. The programs may thus operate as ‘holding environments’ – providing a psychologically safe place in which to reflect on the limitations of the current level of meaning-making, as well as a source of social support through the disturbance that this entails (Day, Harrison & Halpin, 2009; Kegan & Lahey, 2001; Merriam & Clark, 2006; Petriglieri & Petriglieri, 2010).

However, some programs provide one or more extra psychosocial components and challenges with the potential to further assist in the promotion of consciousness development by providing additional opportunities and support to self-reflect, learn from experience, work with diverse perspectives, experiment and take risks. These components can include psychological testing of participants (with associated feedback and development, integrated through the program), professional individual coaching, peer assessment and feedback, extended wilderness-based outward-bound experiences, case-in-point learning, personal case study work and/or community-focussed group projects. All can be described as aligning with Manners’ and Durkin’s (2000) framework for promoting conscious development in that they are interpersonal in nature, emotionally engaging and challenging, as well as being personally salient for participants. Table 4.2 provides a summary of the additional program components.

Table 4.2: Summary of additional psychosocial challenges included in enhanced CLPs

Program component	Description
Community-focussed group projects	This component is a 'stretch assignment' that requires thinking and acting in complex ways (Day & Lance, 2004). Participants are required to select an economic, environmental or social issue in the community and, with a group of other participants, design and implement an intervention to tackle this issue. Generally there are 4-6 projects per program cohort. Although some time is set aside for this work during the program, participants also need to work on the project in their own time. Some programs utilise an action learning approach for the projects, but all vary in the amount of support they provide for project teams. In some programs project groups are required to have implemented their project before completion of the program, whereas other programs require completion of a comprehensive project plan (after scoping and stakeholder engagement) with implementation of the project in the year following the program. The exposure to diverse participant and stakeholder perspectives on the project issues, as well as a lack of 'authority' to impose an intervention or decision, means that project groups must develop an intervention that responds to a variety of perspectives and concerns. This requires adaptability, skilful collaboration, conflict negotiation and flexibility about means and goals (Valcea et al., 2011)
Professional individual coaching	These sessions focus on the development of self-reflection and awareness as well as social complexity. The coach may focus on particular areas in which the participant may need to develop in order to address current leadership and other interpersonal challenges. Time is also taken to explore the impacts of the program journey on the participant's ability to exercise leadership in both their personal and professional lives. In all programs, the professional coaches are part of the facilitation team and are available to participants on an ad hoc basis. Two programs also specify that a minimum number of individual coaching sessions are provided (2-4 sessions).
Psychological testing with associated feedback and development, integrated through the program	Various tools such as the Myers Briggs Type Indicator (MBTI), Dominance, Influence, Steadiness, Conscientiousness test (DiSC), Strengths Deployment Inventory (SDI) and Enneagram are used to provide a form of self-assessment and enhance participants' self-awareness and interpersonal awareness. The tools are introduced during the opening program retreat and are utilised in various ways by the facilitators throughout the program to help participants integrate the learnings more deeply – particularly in group exercises and project work
Extended wilderness-based outward-bound experience	These experiences include challenge-based team and solo activities that last several days and push participants out of their comfort zones. They are focussed on team-building and increasing self-awareness, problem-solving and communication capacity, as well as an understanding of cultural differences and of different leadership styles.

Peer assessment and feedback	<p>The programs utilise a variety of peer assessment and feedback processes designed to enhance self-reflection and awareness, as well as awareness of diverse perspectives. These include the following:</p> <ul style="list-style-type: none"> • Small groups of participants (4-6) are invited to tell each group member something about them that triggers a positive reaction and then something that triggers a negative reaction in them (time is provided for each person to reflect on these and write them down before the feedback begins). When discussing both the positive and negative triggers, the person providing the feedback is also required to reflect on (and 'own) how these positive and negative characteristics are also a part of themselves. • A 'feed forward' process in which participants are asked to 1. Pick a behaviour that they would like to change and that would make a significant, positive difference in their lives; 2. Describe this behaviour to a randomly selected fellow participant; 3. Ask for two suggestions for the future that might help them achieve a positive change in their selected behaviour; 4. Listen to the suggestions and take notes (not comment on the suggestions in any way); 5. Thank the other participant for their suggestion; 6. Ask the other person what they would like to change and repeat steps 1-4 above then; 6. Find another participant and keep repeating the process until the exercise is stopped. • A 360 degree process in which participants are invited to reflect in confidence on the strengths and weaknesses of their fellow participants and this information is summarised in the form of a typical individual 360 degree feedback report.
Case-in-point learning to develop adaptive leadership	<p>Based on the adaptive leadership development program 'The Art and Practice of Leadership Development' taught at Harvard's Kennedy School of Government by Professors Ron Heifetz and Marty Linsky, in case-in-point learning the facilitator takes situations that arise in the group as they happen and utilises them to illustrate something they want the group to learn about adaptive leadership. Participants are asked to get 'on the balcony' to see the larger patterns at play in the group and to help them intervene in more effective ways. At the same time, the facilitator reinforces the concepts and frameworks of adaptive leadership in order to assist participants in recognising and naming what they are learning to see and do. In using case-in-point learning, the facilitator tries to skilfully provide a fine balance between maintaining equilibrium and allowing enough disequilibrium (confusion, frustration conflict etc) to arise so that the group can examine their assumptions about leadership and begin to appreciate what it may actually require (Daloz-Parks, 2005, p7).</p>
Personal case study work	<p>The case study work is designed to offer diverse perspectives on issues and to enhance self-reflection and awareness. Participants work in groups of 6-7 to analyse group members' own case studies of leadership failure (round 1 in the first half of the program) and a current leadership challenge (round 2 in the second half of the program) using the adaptive leadership concepts explained by Heifetz, Grashow and Linsky (2009). A structured format for the analysis is provided in which the case presenter is given time to explain the issue, questions of clarification are then asked by other members of the group and the group then discusses the issue while the case presenter listens and take notes (but is not allowed to comment). Finally, the group makes some recommendations and presents these to the case presenter who then has a chance to speak about what he or she has learned from the process. The process is then repeated with another group member presenting their case. Each case session takes 75 minutes.</p>

For the purposes of this research, we grouped together CLPs including one or more of these additional psychosocial components and labelled those programs as ‘enhanced’, for comparison with CLP programs that mainly focussed on providing the standard experiential issues-based program without these additional components (labelled ‘standard’).

Aims of the research

This study was part of a broader research program, the first part of which was reported in Vincent et al. (2013). The aims of the current study were two-fold. Firstly, to investigate the efficacy of community leadership programs (CLPs) compared to controls (management training programs) in promoting consciousness development. Secondly, to compare standard CLPs to enhanced CLPs in promoting consciousness development – particularly to post-conventional levels. Note that in including a control group, we were attempting to establish a ‘baseline’ measure for consciousness development during the course of an adult education program by which to compare the CLP groups – rather than to compare CLPs with management training per se.

Although this study should be regarded as exploratory, given that no other studies have investigated the efficacy of community leadership programs in promoting consciousness development, the following specific hypotheses were developed:

- Standard and enhanced community leadership program groups will be superior to the control group in promoting consciousness development overall;
- Standard and enhanced community leadership program groups will be superior to the control group in promoting post-conventional consciousness development (i.e. from Achiever to Individualist and above);

- The enhanced community leadership program group will be superior to the standard community leadership program group in promoting post-conventional consciousness development (i.e. from Achiever to Individualist and above)

In addition, because our previous study found that a preference for Intuition on the MBTI was associated with significantly higher consciousness development on entry into community leadership programs and with greater consciousness development during the programs when compared to a preference for Sensing (Vincent et al., 2013) we wanted to explore the distribution of these preferences across our three program groups and examine the possibility that inequalities, if found, might be an influencing factor in any differential impact on consciousness development found between the groups.

Materials and Methods

Participants

Eleven community leadership programs (with a total of 337 participants) and two management programs (with a total of 37 participants) were initially recruited for this study. The latter participants, who acted as controls, completed a non-academic management program which is run by the executive education unit of a university and offered in two Australian States. Completed over 12 months, content in this program is delivered in six 2-day modules with a break of six weeks between modules. Assignments are designed to link classroom knowledge to workplace implementation. Content is delivered in lectures and video presentations and interactive tutorials, using case-study analyses, and problem-solving exercises and is focussed on teaching participants how to build and lead cohesive teams and develop problem-solving and analysis abilities. Participants are assessed on the presentation and report of a work-based project (such as developing a risk management or performance

management plan for their workplace), completion of assignments and a case study exam. The program targets middle and senior managers with relevant experience, but there are no other selection criteria.

Of the 11 CLPs included in the study, four programs comprised the standard group and 7 comprised the enhanced group. Sample size was restricted by the number of programs prepared to participate in the research and the number of people within the programs who agreed to participate. Overall, 96% of participants in the 13 programs (N=390) were tested at the commencement of their programs and 89.6% of these (n=335) participated in the final testing session at the end of their program. However, attrition was not evenly spread, with participants in the control group having a much greater drop-out rate (48.6%) than participants recruited from CLPs (6.2%). A possible reason for the difference in attrition is that all CLPs scheduled the final testing session as part of a retreat at the end of the program, whereas there was no retreat for the control programs and these participants were asked to complete the final testing in their own time at the end of their last program seminar. No programs dropped out of the research. The composition of the final sample was as follows: Standard CLP group, $n = 80$; Enhanced CLP group, $n = 237$; control group, $n = 19$. The statistical techniques utilised in the analyses for this research are robust for uneven group sizes (Pallant, 2007).

Consciousness levels for participants at program entry ranged from Diplomat to Strategist. The distribution of consciousness levels in the sample was similar to that reported in recent research with adults in management (Cook-Greuter, 2004). A summary of the sample characteristics by group is shown in Table 4.3.

One-way analyses of variance in age and mean stage of consciousness (at program entry), found no significant difference between the three groups. Chi-square analyses revealed no

significant differences between the groups on gender, first language or Aboriginality. However, a one-way analysis of variance found a statistically significant difference in education level for the three groups: $F(2, 360) = 19.16, p < .0001$. The effect size, calculated using eta squared was .09 (medium). Post hoc comparisons using the Tukey HSD test ($p < .05$) indicated that the mean education level was significantly higher for the enhanced CLP group compared to the standard CLP and the control groups. The latter did not differ significantly from each other.

Chi-square tests showed no significant differences in gender, Aboriginality or English as a second language between the research groups and the participants that dropped out. One-way analyses of variance showed no significant difference in age or consciousness stage on program entry, but did reveal a significant difference in education: $F(3, 359) = 10.24, p < .0001$. Eta squared was .08 (a medium effect size). Post hoc comparisons using the Tukey HSD test ($p < .05$) indicated that the mean education level for people that dropped out ($M = 5.70, SD = 1.59$) was significantly lower than the enhanced CLP group. However, the people that dropped out did not differ significantly in terms of education from the standard CLP or control groups (means and standard deviations are shown in Table 4.3).

Table 4.3: Sample characteristics by group

Group	n	Female	Mean age	Education	ATSI	ESL	Consciousness stage on entry				
							4	5	6	7	8
Enhanced CLP	236	46.4%	40.54 (7.28)	6.63 (1.49)	4.6%	6.3%	4	32	157	40	4
Standard CLP	80	52.5%	39.45 (8.73)	5.72 (1.67)	0%	5.0%	2	14	55	7	2
Control	19	63.2%	39.50 (8.05)	5.53 (1.07)	5.6%	5.3%	0	1	16	2	0

Note: Numbers in parentheses are standard deviations

Measures

The Washington University Sentence Completion Test (WUSCT).

As we noted in Vincent et al. (2013), the WUSCT was first published in 1970 (Loevinger & Wessler, 1970; Loevinger, Wessler & Redmore, 1970) and revised in 1985 (Loevinger, 1985) and in 1996 (Hy & Loevinger, 1996). It has been described as the most extensively validated projective technique for assessing personality (Lilienfeld, Wood & Garb, 2000, p. 56) and has been used in hundreds of studies and administered to thousands of people (Cohn & Westenberg, 2004). The premise of the test is that a person's choice of sentence content and structure models the way they see the world (Cook-Greuter, 1999). Respondents complete a series of 36 sentence stems selected for eliciting various aspects of consciousness development. Responses are scored using a detailed manual (Hy & Loevinger, 1996) and combined using ogive rules to place the respondent in one of the eight stages of development. We utilised the ogive rules modified by Cook-Greuter (1999); they have higher cut-off numbers for assigning scores in the post-conventional stages (Vincent et al., 2013).

High inter-rater reliability has consistently been found for the WUSCT in studies involving a range of populations. Using the item sum score, Loevinger and Wessler (1970) reported a Cronbach's alpha of .91 and this has been supported in several subsequent studies (Manners & Durkin, 2001). High and significant correlations between the two split halves of the forms have been found, with a similar correlation between each half and the full version (Novy and Francis, 1992; Novy, Blumentritt, Nelson & Gaa, 1997). Manners and Durkin (2001) noted that the WUCST has compared favourably with other measures of personality development (Vincent et al., 2013).

We used the two alternate short forms of the WUSCT (Loevinger, 1985) to prevent the measurement error effects found in repeated use of the full test (Redmore & Waldman, 1975).

We also followed the recommendation of Hy and Loevinger (1996) for the use of overall consciousness stage, rather than the item sum in research utilising the WUSCT (Vincent et al., 2013).

The Myers Briggs Type Indicator (MBTI)

The MBTI is a very popular inventory used to measure personality constructs (see Vincent et al. 2013 for a brief review). It is viewed as a valuable tool to develop understanding of self and others and for enhancing effective teamwork (Lloyd, 2012). Although it is often treated with disdain by academic researchers who prefer the use of the Big Five, remarkable convergence in the two approaches has been found (Furnham, Dissou, Sloan & Chamorro-Premuzic, 2007; Lloyd, 2012) and Lloyd (2012) suggested that they could readily be harmonised. We selected the MBTI in preference to the Big Five because of its focus on the positive qualities of all preferences, because it is easy to use and comprehend (from a program participant perspective) and was already in standard use in some of the programs. In addition, as the first author is an accredited MBTI trainer, she was able to offer to administer the instrument as part of an engaging 4-hour team-building workshop built around understanding the preferences. As most CLPs operate on very limited budgets and the workshop was offered free of charge, this was an additional incentive for some of them to participate in the research. One of the control programs also took up the workshop option.

The MBTI Self-Scorable Form M was utilised. This is a self-report instrument on which respondents select one of two options for each of 93 items to identify their preferences (and preference clarity scores) on four pairs of dichotomous constructs that were specified or implied in Jung's (1921) theory of personality and describe opposite, but equally valid, ways in which we use our minds (Myers, Briggs, McCaulley, Quenk & Hammer, 2003). The only preferences of interest in the current study were Sensing and Intuition. This dichotomy

indicates differences in the way people take in information, and the kind of information they like and trust. People preferring to take in information using their senses and focus on the present and what is real and tangible are labelled as having a Sensing preference. Those preferring to focus on the future – patterns, possibilities, meanings and connections are labeled as having a preference for Intuition. We restricted our analyses to the preferences for Sensing and Intuition because, as noted above, we had previously found that Intuition is associated with higher consciousness development when compared to the Sensing preference, and we had found no other associations between consciousness development and other MBTI preferences or combinations thereof (Vincent et al., 2013).

An extensive review of the psychometric properties of the MBTI and its reliability and validity found it to be generally satisfactory (Gardner & Martinko, 1996). A more recent meta-analytic reliability study by Capraro and Capraro (2002) reported strong internal consistency and test–retest reliability, with a Cronbach's Alpha of .84 for the Sensing-Intuition dichotomy (computed from over 10,000 tests) and test–retest coefficients stable over time (ranging from 1 week to 2.5 year intervals). Distribution tables which reveal differing proportions of types across occupations that are consistent with type theory, provide extensive evidence of criterion-related validity. In addition, numerous studies have reported correlations between the scales of the MBTI and various personality, academic and interest variables (Gardner & Martinko, 1996; Myers et al., 2003).

Procedure

Participants gave informed consent to take part in the study. They completed the MBTI and the WUSCT (first 18 stems) on program entry and the WUSCT (second 18 stems) on program exit (this was at 9 months for 2 programs, 10 months for 4 programs , 11 months for 2 programs, 12 months for 2 programs and 17 months and 24 months for one program each). All

WUSCT protocols were scored by a single trained scorer. Scoring of 67 of the protocols was checked by a second expert scorer, yielding a proportionate agreement on overall protocol consciousness stage of 93%, with a difference of one stage between scorers in only 7% of the protocols (Kappa = 0.79, $p < .0005$).

Missing data and assumption checks

Missing data for education level (3.07%) and age (1.68%) were treated with pairwise deletion in the analyses, resulting in different sample sizes for analyses with these variables included. Preliminary checks were conducted to ensure there were no violations of any of the assumptions of the statistical tests undertaken (Vincent et al., 2013).

Results and discussion

Preliminary analyses – the effect of age, education and program length

Correlations between consciousness stage and age and education were investigated in preliminary analyses because research has found modest correlations between these variables in some adult samples (Cohn, 1998; Manners & Durkin, 2001). A significant difference was evident in our sample, between the mean education level of the enhanced CLP group (see Table 4.2) and the other two groups - standard CLP and control. Education level was coded as an ordinal scale. Although a small correlation between education and stage of development on program entry was found ($r = .20$, $n = 363$, $p < .01$), there was no significant correlation between age or education level and the amount of consciousness development that occurred between program entry and program exit. It was therefore not deemed necessary to control for these variables in subsequent analyses. Likewise, there was no significant correlation between program length and the difference between the consciousness stage of participants at program entry and exit.

The effectiveness of community leadership programs in promoting consciousness development

Table 4.4 shows the mean consciousness stage of participants for the two CLP groups and the control group at program entry and program exit, as well as the difference between these two scores. In order to test the hypothesis that standard and enhanced community leadership program groups would be superior to the control group in promoting consciousness development overall, a one-way between-groups analysis of variance was conducted to explore impact of group on the exit-entry consciousness level. There was a statistically significant difference in scores for the three groups: $F(2, 332) = 14.66, p < .0001$. The effect size calculated using eta squared was .08 (medium). Post hoc comparisons using the Tukey HSD test ($p < .05$) indicated that the mean difference score for the enhanced CLP group was significantly greater than the standard CLP and control groups. The latter did not differ significantly from each other, providing partial support for the hypothesis that CLPs are superior to the control group in promoting consciousness development. The mean increase in consciousness stage from program entry to program exit represented just over a third of a stage for the enhanced CLP group. In contrast, the standard CLP and control groups showed no overall increase at program exit.

Table 4.4: Participants' mean consciousness stage at entry and exit and mean difference between the latter by group

Group	Mean stage on entry	Mean stage on exit	Difference in stage T2 – T1
Enhanced CLP	6.03 (.66)	6.35 (.70)	.32 (.61)
Standard CLP	5.91 (.68)	5.86 (.65)	-.05 (.61)
Control	6.05 (.40)	5.89 (.57)	-.16 (.60)

Note: Numbers in parentheses are standard deviations

The percentages of participants from each consciousness stage at program entry that had developed by one or more consciousness stage at program exit is presented in Table 4.5. An independent samples t-test found no significant difference between the exit-entry consciousness stage level differences for the enhanced CLP ($M = .75, SD = .62$) and standard CLP ($M = .43, SD = .65$) groups for those participants who tested at the Expert stage on program entry. However, the effect size was approaching moderate ($\eta^2 = .055$).

Of most interest however, are the results from participants at the Achiever stage on program entry ($n = 226$) that had advanced a consciousness stage by program exit ($n = 52$), because this shift is from the last conventional to the first post-conventional stage. A one-way between-groups analysis of variance with the exit-entry consciousness level as the dependent variable and group as the independent variable was conducted to test the two final hypotheses. There was a statistically significant difference in exit-entry consciousness level for the three groups: $F(2, 225) = 14.33, p < .0001$. η^2 was .11 (a medium effect). Post hoc comparisons using the Tukey HSD test indicated that the mean score for the enhanced CLP group ($M = .29, SD = .53$) was significantly higher than the standard CLP ($M = -.13, SD = .51$) and control ($M = -.06, SD = .57$) groups, thus supporting our hypothesis that the enhanced community leadership program group would be superior to the standard community leadership program group in promoting post-conventional consciousness development. However, the standard CLP group did not differ significantly from the control group, and thus the hypothesis that standard and enhanced community leadership program groups would be superior to the control group in promoting post-conventional consciousness development was only partially supported.

Table 4.5: Percentage of participants advancing at least one consciousness stage on program exit

Consciousness stage on entry	Program exit		
	Enhanced CLP	Standard CLP	Control
Diplomat	100% (4/4)	100% (2/2)	N/A
Expert	68.7% (22/32)	50% (7/14)	0% (0/1)
Achiever	29.3% (46/157)	7.3% (4/55)	12.5% (2/16)
Individualist	22.5% (9/40)	0% (0/7)	0% (0/2)

Note: Numbers in parenthesis represent the actual number of participants who shifted a consciousness stage over the total number of participants at that stage in that group.

As can be seen from Table 4.5, 22.5% of participants in the enhanced CLP group at the first post-conventional stage of consciousness (Individualist) on program entry had transitioned to the next stage of post-conventional consciousness (Strategist) on program exit. This can be contrasted with the results for the standard CLP and control groups in which no participants transitioned beyond the Individualist stage. This indicates that enhanced community leadership programs are not only superior in promoting conventional to post-conventional consciousness development; they are also superior in promoting increased development within the post-conventional tier.

The influence of preferences for Sensing and Intuition on the differential group outcomes

A Chi-square test for independence indicated a significant association between the groups and the distribution of Sensing and Intuition preferences, $\chi^2 (2, n = 374) = 27.27, p = .0005$. The effect size was medium (Cramers V = .27). Table 4.6 displays the counts and percentages of those with a preference for Sensing and those with a preference for Intuition in each group. It can be seen that the enhanced CLP group was comprised of 40% of participants with a

preference for Sensing, whereas in the standard CLP and control groups 68% and 70% of participants (respectively) had a preference for Sensing.

Table 4.6: Distribution of MBTI Sensing and Intuition preferences by group

		MBTI Preference		Total	
		Sensing	Intuition		
Groups	Enhanced	Count	101	151	252
	CLP	% within group	40.1%	59.9%	100.0%
		% of Total	27.0%	40.4%	67.4%
Standard	CLP	Count	58	27	85
	CLP	% within group	68.2%	31.8%	100.0%
		% of Total	15.5%	7.2%	22.7%
Control	Control	Count	26	11	37
	Control	% within group	70.3%	29.7%	100.0%
		% of Total	7.0%	2.9%	9.9%
Total	Total	Count	185	189	374
	Total	% within groups	49.5%	50.5%	100.0%
		% of Total	49.5%	50.5%	100.0%

In order to assess the impact that this uneven distribution of preferences for Sensing and Intuition may have had within the study groups, only participants with a Sensing preference were selected and a Chi-square test for independence was conducted to see if there was any difference between the groups in the number of Sensing types who advanced a stage of consciousness. This analysis indicated a significant difference between the groups in whether or not their participants advanced a stage of consciousness, $\chi^2 (2, n = 160) = 11.63, p = .003$, Cramers V = .27. Table 4.7 displays the counts and percentages for the groups. It can be seen that in the enhanced CLP group, 33% of those with a preference for Sensing advanced a stage of consciousness, whereas in the standard CLP and control groups the percentage was 13% and 0% respectively. A further Chi-square test for independence was conducted, selecting only those with a preference for Intuition. This analysis did not indicate any significant differences

between the groups. Table 4.7 also displays the counts and percentages for this analysis, and it can be seen that the percentage of participants with a preference for Intuition that advanced a stage of consciousness is very similar for the enhanced CLP (35%), standard CLP (23%) and control (29%) groups. Analyses of variance tests produced similar results.

In order to probe further into these unexpected results, a Fishers Exact Probability Test was conducted, selecting only those with a sensing preference who were also assessed at the Achiever stage on program entry in either of the two CLP groups. This indicated that significantly more Sensing participants at Achiever level shifted to the first post-conventional stage of consciousness (Individualist) in the enhanced CLP group ($p = .001$). There were no differences found between the two CLP groups using Fishers Exact Probability Tests when examining those with a Sensing preference who shifted from the Expert to the Achiever level of consciousness, or when examining those with a preference for Intuition who shifted from the Expert to Achiever or from the Achiever to Individualist level. This indicates that the enhanced CLP group was superior only in facilitating the development of those with a preference for Sensing to the first post-conventional stage of consciousness, although, as we have reported previously with this same sample, a preference for Intuition on the MBTI was associated with significantly higher consciousness development on entry into community leadership development programs and with greater consciousness development during the programs when compared to a preference for Sensing overall (Vincent et al., 2013). Table 4.8 displays the numbers and percentages for the comparisons using Fishers Exact Probability Test.

Table 4.7: Consciousness stage increases by Sensing and Intuition preferences and group

		Consciousness Stage Increase						
		Participants with preference for Sensing			Participants with preference for Intuition			
		No stage increase	Stage increase	Total	No stage increase	Stage increase	Total	
Groups	Enhanced CLP	Count	63	31	94	92	50	142
		% within group	67.0%	33.0%	100.0%	64.8%	35.2%	100%
		% of Total	39.4%	19.4%	58.8%	52.6%	28.6%	81.1%
	Standard CLP	Count	47	7	54	20	6	26
		% within group	87.0%	13.0%	100.0%	76.9%	23.1%	100%
		% of Total	29.4%	4.4%	33.8%	11.4%	3.4%	14.9%
	Control	Count	12	0	12	5	2	7
		% within group	100.0%	.0%	100.0%	71.4%	28.6%	100%
		% of Total	7.5%	.0%	7.5%	2.9%	1.1%	4.0%
Total	Count	122	38	160	117	58	175	
	% within groups	76.3%	23.8%	100.0%	66.9%	33.1%	100%	
	% of Total	76.3%	23.8%	100.0%	66.9%	33.1%	100%	

Table 4.8: Consciousness stage increases by level on entry, Sensing and Intuition preferences and group

			Consciousness Stage Increase					
			Sensing/Expert (and below) on entry			Sensing/Achiever on entry		
			No stage increase	Stage increase	Total	No stage increase	Stage increase	Total
Groups	Enhanced CLP	Count	9	15	24	45	16	61
		% within group	37.5%	62.5%	100.0%	73.8%	26.2%	100%
		% of Total	25.7%	42.9%	68.6%	43.7%	15.5%	59.2%
	Standard CLP	Count	5	6	11	41	1	42
		% within group	45.5%	54.5%	100.0%	97.6%	2.4%	100%
		% of Total	14.3%	17.1%	31.4%	39.8%	1.0%	40.8%
Total	Count	14	21	35	86	17	103	
	% within groups	40%	60%	100.0%	83.5%	16.5%	100%	
	% of Total	40%	60%	100.0%	83.5%	16.5%	100%	
			Intuition/Expert (and below) on entry			Intuition/Achiever on entry		
			No stage increase	Stage increase	Total	No stage increase	Stage increase	Total
Groups	Enhanced CLP	Count	1	11	12	66	30	96
		% within group	8.3%	91.7%	100.0%	68.8%	31.3%	100%
		% of Total	5.9%	67.4%	70.6%	60.6%	27.5%	88.1%
	Standard CLP	Count	2	3	5	10	3	13
		% within group	40.0%	60.0%	100.0%	76.9%	23.1%	100%
		% of Total	11.8%	17.6%	29.4%	9.2%	2.8%	11.9%
Total	Count	3	14	17	76	33	109	
	% within groups	17.6%	82.4%	100.0%	69.7%	30.3%	100%	
	% of Total	17.6%	82.4%	100.0%	69.7%	30.3%	100%	

Summary of the research outcomes

This research provides further support for the finding by Manners, Durkin and Nesdale (2004) that programs designed in accordance with the conceptual framework developed by Manners and Durkin (2000) can successfully trigger consciousness development. In the current study, the group of CLPs that offered challenge to consciousness primarily through the exploration of community issues (standard CLPs) was equally successful in facilitating development within the conventional tier (from Expert to Achiever) to the program group that offered this in addition to other psychosocial components (enhanced CLPs). However, to trigger development beyond the last conventional stage (Achiever) to the first post-conventional stage (Individualist) and from the latter to the level above (Strategist) our results indicated that more extensive and challenging psychosocial development components are necessary, as only the enhanced CLP group was successful in doing so

The results found in this study with respect to the MBTI Sensing and Intuition preferences have added greater nuance to those outlined above, as well as to our earlier findings (with the same sample) that a preference for Intuition was associated with significantly higher consciousness development on entry into leadership development programs and with greater consciousness development during the programs when compared to a preference for Sensing overall (Vincent et al., 2013). Differences in the distribution of Sensing and Intuition preferences between the groups in this study were examined to explore the possibility that having more participants with a preference for Sensing in a group would be a confounding factor.

What we found, however, was complex. Although the standard CLP and control groups did, in fact, have a significantly greater proportion of Sensing participants, and were inferior (when

compared to the enhanced CLP group) in facilitating shifts in those participants from the last conventional stage of consciousness (Achiever) to the first post-conventional stage (Individualist) and beyond, they were not significantly different to the enhanced CLP group in shifting those with a preference for Sensing within the conventional stages of development (i.e. from Expert to Achiever) or in shifting those with a preference for Intuition from Expert to Achiever or Achiever to Individualist. The results therefore indicate that the additional psychosocial challenges offered by the programs in the enhanced CLP group were of significance in terms of promoting post-conventional consciousness development only in those with a preference for Sensing.

Given our earlier findings with the same sample in relation to the greater consciousness development of those with a preference for Intuition (Vincent et al., 2013), the results from this study suggest that the latter have a greater propensity for consciousness development when participating in CLPs regardless of whether these include additional psychosocial challenges. This supports the idea of Intuition as a 'readiness factor' for consciousness development (Palus & Drath, 1995). The finding that the differences between the types of CLP groups in their capacity to promote post-conventional consciousness only related to the Sensing types, reinforces our earlier recommendations that the latter require particular consideration in the design of programs to promote such development. Whereas provocative issues-based sessions may provide enough of a challenge to current meaning-making to trigger post-conventional development for Intuitives, additional psychosocial components of the types included in enhanced CLPs appear to be required to provide the extra impetus that Sensing types need in order to make such a shift. Given that Sensing types are in the majority world-

wide (Schaubhut & Thompson, 2009) this consideration is particularly pertinent if we aim to develop the consciousness required to tackle our global adaptive challenges.

For those with a Sensing preference at the Achiever level of consciousness, it may of course also be the case that being in a group with a majority of people with a preference for Intuition (which is unusual) presents an additional psychosocial challenge that in itself (or in combination with other such challenges) provides a trigger for post-conventional growth. Why this would not also be the case for Sensing types at the Expert stage of consciousness is unclear – and something that could be investigated in future research.

Limitations and additional suggestions for future research

This study has several limitations. These include the small size of the control group, and the lack of participant follow-up, to ascertain whether consciousness development was maintained – as Manners et al. (2004) did with their small group of participants. Given the size of our sample and its geographic dispersion around Australia, undertaking the latter would have required substantial additional resources. However, since it is possible for consciousness development to regress (Manners & Durkin, 2001; Manners, Durkin and Nesdale, 2004) then future research should aim to understand whether there are particular trait, state, environmental and sociocultural factors that impact the sustainability of newly-acquired consciousness levels post a developmental intervention (as well as those that influence development during such an intervention). It should also explore whether particular interventions are more able to facilitate a sustainable consciousness transition and why. Follow-up research could also usefully examine whether those who experience such maturation actually become better leaders in their communities.

Another important limitation of this research is our grouping together of the diverse additional psychosocial development components incorporated in enhanced CLP programs. Thus it is uncertain whether some of these may have been more effective in facilitating consciousness development than others. Moreover, programs were placed in the enhanced CLP group if they included just one of the specified additional psychosocial components – whereas some programs included several. Unfortunately, it was not possible to compare individual programs to ascertain whether any particular types of psychosocial enhancements (or combinations of these) were more effective than others for two reasons. The first is the small size of the samples at the program level – particularly when comparing participants at different levels of consciousness development within these programs. More importantly however, the community leadership sector is small in Australia and the programs are well-connected with each other. Any comparison of individual programs by psychosocial components would likely identify them and would thus breach ethical standards for the research. Future research could overcome this limitation by designing specific interventions to test particular psychosocial elements rather than utilising pre-existing programs. In addition, as Bartone et al. (2007) have argued, much more work needs to be done, both to establish whether, as suggested by some researchers, there are generalised processes (such as meditation) which may foster or speed growth throughout the developmental process, and to clarify the specific factors that influence development at each consciousness level. Consideration should also be given to whether such processes and factors are different for those with preferences for Sensing and Intuition.

Another possible limitation is the difference in education level found in the enhanced CLP group when compared to the standard CLP and control groups. Although the correlation

between education level and stage of consciousness on program entry was small and there was no significant relationship found between program exit and entry consciousness levels and education, we did not control for the former. As outlined previously, Miller (1994) found that high levels of education did not guarantee high levels of consciousness development but Truluck and Courtenay (2002) found a positive relationship between the two in older adults. Research investigating the impact of education on post-conventional consciousness development is virtually non-existent and should be a consideration in future studies.

Finally, the differences in recruitment of participants into the CLPs and the control programs could be considered a possible limitation. However, given that no differences were found in our analyses between the standard CLP and control groups it seems unlikely that differential recruiting procedures introduced a bias. Similar recruiting criteria and procedures are utilised across all CLPs and so whatever bias they might have introduced should be applicable to both CLP groups – not just the enhanced group. That said, it is possible that programs with enhanced psychosocial challenges are more attractive to certain people - perhaps those with particular ‘readiness for development’ factors (Palus & Drath, 1995). We found a greater proportion of Intuitives in the enhanced CLP group and it is possible that there may be other self-selection biases that we have not accounted for that may have influenced the outcomes of this research. Again, a research design that did not utilise pre-existing programs could minimise such potential sources of bias.

Practice implications and conclusions

The results of this research suggest that when aiming to develop consciousness to post-conventional levels, designers of leadership development programs should be guided by the conceptual framework formulated by Manners and Durkin (2000). Programs need to be

personally salient for participants, interpersonal in nature, emotionally engaging and challenging, but amenable to positive interpretation. They should include psychosocial challenges that offer ambiguous challenges and exposure to diverse perspectives and support deep self-reflection, learning from experience, experimentation and risk-taking. The study results indicate that this is particularly important when attempting to assist those with a preference for Sensing to develop post-conventional consciousness. As noted above, it may be that greater-than-usual exposure to the alternative perspectives and values of people with a preference for Intuition may provide additional challenges that assist in shifting Sensing people's habits of mind. However, the converse does not appear to apply to those with a preference for Intuition.

It follows that traditional management and leadership development programs and MBAs are not likely to develop the consciousness shifts needed to tackle the kinds of adaptive problems faced by organisations, communities, and globally. Such programs tend not to offer disequilibrating psychosocial challenges for levels of consciousness development beyond the Expert level (Akrivou & Bradbury-Huang, 2014; Donovan, 1997; Rooke & Torbert, 2005); rather, they offer horizontal development for those beyond this stage. Thus, as Akrivou and Bradbury-Huang (2014) have argued, they may reproduce managers as 'ostensibly morally neutral technicians engaged in a world of purely rational problem solving' (p13). In order to reach a tipping point for a shift in our global capacity to tackle our adaptive challenges, numbers are critical. Business schools and other organisations that offer development for future leaders need to recognise what is at stake and transform themselves from socialising graduates to reproduce the status quo to helping them expand humanity's horizons for the betterment of societies (Akrivou & Bradbury-Huang, 2014).

In order to challenge the predominant world views and develop leaders with the necessary creative, innovative and analytical abilities, long-range perspectives, and tolerance for ambiguity and uncertainty, trainers must move beyond horizontal development and incorporate vertical (psychosocial) development processes into leadership programs, taking account of the levels of consciousness development at which program entrants are currently functioning (Bartone et al., 2007; Forsythe, Snook, Lewis, & Bartone, 2002; Kuhnert & Lewis, 1987) as well as their Sensing-Intuition preferences. Their success will, of course, require program professionals who have the capacity to effectively facilitate these vertical processes (Petriglieri, 2011). Recent suggestions have also been made for promoting vertical development within the workplace environment through feedback, participation and delegation that is tailored to the limitations of each developmental stage in leader-follower dyads (Valcea et al., 2011), through developmental mentoring networks (Ghosh, Haynes & Kram, 2013) and through the cultivation of a developmental organisational culture (Drath, Palus & McGuire, 2010).

Meanwhile, it is clear that Australian community leadership programs that focus on interpersonally-based, issue-centred awareness-raising and other psychosocial challenges can be successful in facilitating shifts in consciousness to post-conventional levels in their participants. The emphasis on recruiting people in positions of formal leadership into CLPs helps to mitigate the problem highlighted in the adage that sending a changed person back to an unchanged system is an exercise in futility. As Day et al. (2009) have noted, a formal leader is more likely to be in a position to influence such a system in positive ways. With over 6000 graduates of such programs in Australia, and their continued expansion into other regions of the country and throughout the Asia Pacific region, we believe enhanced CLPs have the

potential to do as Donovan (1997) suggested - create a 'snowball' effect of higher level thinking that rolls throughout communities, organisations and institutions, and eventually lifts consciousness capacity more generally. They also offer a potential practice model for the development of leadership and other programs to support the transformation from conventional to post-conventional consciousness.

Chapter 5: Study 3 - Triggers, type and timing: exploring developmental readiness and the experience of recent transformations in consciousness in Australian community leadership program participants

Statement of Authorship

By signing the Statement of Authorship, each author certifies that their stated contribution to the publication is accurate and that permission is granted for the publication to be included in the candidate's thesis.

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Preface to Study 3

The results from the study in the preceding chapter provided further support for Manners' and Durkin's (2000) argument that personality factors may operate to enhance or constrain consciousness development. The results also supported Manners' and Durkin's specifications for the characteristics of interventions designed to promote consciousness development (i.e. that they need to offer challenges that are structurally disequilibrating for the stage of development of their participants, and that are interpersonal in nature, personally salient and emotionally engaging) . It was found however, that that only the enhanced CLPs (which offered psychosocial challenges over and above those provided in the standard CLP format) were successful in promoting those with a preference for MBTI Sensing to the first post-conventional stage of consciousness.

In order to deepen an understanding of consciousness development, particularly to the first post-conventional stage, the following qualitative study was designed to explore the experience of consciousness development from the perspectives of those who had recently shifted a stage (or come close to doing so). It enquired about the changes these individuals had noticed in themselves, as well as the nature and timing of experiences (within the program and/or in their broader lives) that they believed may have triggered such changes. Responses were compared to those from participants who had not shifted a stage of consciousness during the course of the study. In addition, responses from shifters with MBTI preferences for Sensing and Intuition were compared, with the aim of shedding further light on the differential results between individuals with these preferences found in the two previous studies.

Abstract

This paper reports on leadership program participants' experience of, and readiness for, stage transition (when one adult developmental stage gives way to another – as in Loevinger's (1976) stage theory of consciousness, or ego, development). This appears to be the first study reporting the subjective experience of recent shifts in consciousness specifically within the context of leadership development programs. Using qualitative thematic methods to analyse survey responses from 84 individuals graduating from three Australian community leadership programs, we compared the accounts of those who had shifted a stage of consciousness ('shiffters'), those who had changed but not transitioned ('movers'), and those who had not experienced change ('non-shiffters'). We found support for theoretical predictions concerning the types of changes shiffters noticed in themselves, consistent with the small but growing body of research showing positive associations between consciousness development and better leadership performance and organisational outcomes. The data additionally provide support for the conceptual framework of consciousness development articulated by Manners and Durkin (2000), and contextual information which may help explain and predict the differing responses to leadership training of people with Myers Briggs Type Indicator (MBTI) Sensing and Intuition preferences – thus contributing to program selection and design. An important, if preliminary, finding was that when selecting candidates for developmental training programs, people who are experiencing significant work or other life changes and challenges should arguably be prioritised rather than sidelined: our shiffters cited such challenges as influences promoting readiness for change. Although these conclusions are based on an analysis of survey data, they provide direction for future in-depth qualitative and quantitative research.

Keywords: Constructive developmental theory; leadership development; ego development; adult development; Myers Briggs Type Indicator; MBTI; Washington University Sentence Completion Test; WUSCT.

Introduction

Although leadership has always been challenging, its complexity has intensified along with globalisation, major geo-political shifts, rapidly changing technologies, rising global inequality, growing evidence of the unsustainability of human use of planetary resources, climate change and the increasing expectation that those in positions of leadership must be accountable for the ethical issues arising from these challenges (Akrivou & Bradbury-Huang, 2011; McKenna, Rooney & Boal, 2009). Kegan (1994), a prominent adult constructive developmental theorist, pointed out that we are ‘in over our heads’ with the adaptive challenges we are now facing in our communities, organisations and families because they demand much more than the acquisition of specific skills or knowledge – “They make demands on our minds, on how we know, on the complexity of our consciousness” (p. 5). It is for this reason that Kegan and Lahey (2009) argued that leadership development interventions should focus on supporting people to transform their current way of making sense of the world (shift their consciousness) so that they can take a broader perspective and increase their adaptive capacity.

Constructive developmental theories are concerned with how people make meaning of themselves and the world around them and how these constructions grow more complex over the lifespan as adults evolve through qualitatively distinct stages. Loevinger’s (1976) constructive developmental stage theory of ego development (now more commonly referred to as ‘consciousness development’) provides a framework for understanding this growth

through the lifespan. According to the theory, as growth proceeds there is increasing personal autonomy, greater flexibility, increased self-awareness, increased interpersonal awareness, increased capacity for reflection, greater tolerance for ambiguity and difference, as well as a decline in defences (Cook-Greuter, 2004; Manners & Durkin, 2001). Since it makes intuitive sense that such growth may be linked to greater leadership capacity and skill, it is not surprising that adult constructive developmental theories have been used to inform leadership and executive development interventions for many years (Cook-Greuter, 2004; Kegan & Lahey, 2001; Laske, 1999, 2003; McAuliffe, 2006; Palus & Drath, 1995; Torbert et al., 2004). However, it is only since McCauley, Drath, Palus, O'Connor and Baker (2006) undertook an extensive critical review of the research literature and suggested that these theories can provide an integrative framework for the leadership field, that they have begun to infiltrate mainstream leadership and executive development literature more significantly. Since then, a growing body of academic research has shown associations between higher consciousness development and better leadership performance and organisational outcomes (Barker & Torbert, 2011; Bartone, Snook, Forsythe, Lewis & Bullis, 2007; Brown, 2011; Harris & Kuhnert, 2008; Helsing & Howell, 2013; Joiner & Josephs, 2007; Strang & Kuhnert, 2009). There are also increasing calls for, and interest in, the design of interventions to promote adult consciousness development in business schools and in the leadership/executive development arena (Akrivou & Bradbury-Huang, 2011; Akrivou & Bradbury-Huang, 2014; Drago-Severson & Blum-DeStefano, 2014; Ghosh, Haynes, & Kram, 2013; Joiner & Josephs, 2007; Kegan & Lahey, 2009; Valcea, Hamdani, Buckley & Novicevic, 2011; Vincent, Ward & Denson, 2013, Vincent, Ward & Denson, 2014).

In spite of this growing interest in interventions to promote consciousness development, empirical and evaluation research in this area remains almost as sparse as it was when

McCauley et al. (2006) published their review. There is still very little evidence to support speculation about the factors that might foster growth in general, and at each of the different developmental stages, or about the individual 'readiness' factors that might mediate such development (Bartone et al., 2007; McCauley et al., 2006). There is a particular lack of research into how movement to post-conventional levels of consciousness development, those beyond the norm of the general population, might be facilitated. As McCauley et al. (2006) noted, post-conventional growth is not part of normal development so there are few social supports for it, and interventions designed to trigger growth at the conventional levels cannot be assumed to have the same effect at post-conventional levels. Moreover, research on how people experience their own consciousness development and what they believe has been important in promoting this growth, is extremely limited.

This paper represents the final phase of a three-stage research initiative designed to investigate factors influencing the promotion of postconventional consciousness development within community leadership development programs (CLPs) in Australia. Although they have not been deliberately designed to do so, many Australian CLPs offer challenges that align with the framework for interventions to promote consciousness development articulated by Manners and Durkin (2000) and that are potentially structurally disequilibrating for later conventional consciousness stages (Vincent et al., 2013; Vincent et al., 2014). The larger project recruited 337 participants in 11 CLPs and 37 controls from two non-academic (but university-run) professional management programs. This final qualitative study involved 84 graduates of three CLPs. We classified participants into three groups – those individuals who had transitioned a stage of consciousness during the course of the CLP ('shiffters'), those who had come very close to doing so ('movers'), and those who had not (non-shiffters'). The primary

aim of this research was to enhance qualitative understanding of how some trait, state and environmental factors may influence readiness for consciousness development and transition, in order to inform future design of, and selection of participants for, leadership development and training. Specifically, we analysed and compared shifters', movers' and non-shifters' descriptions of program factors and other internal and external influences on their development during the course of their program (and the preceding year). From a theoretical perspective, we were particularly interested in whether participants' descriptions of what they experienced and what made a difference aligned with Loevinger's (1976) constructive developmental theory and with Manners' and Durkin's (2000) framework for interventions to promote consciousness development.

Background to the research

The Loevinger/Torbert theory of consciousness development

Torbert et al. (2004) adapted Loevinger's (1976) theory of ego development to produce a model and terminology that aligned with the theory, but was intended to facilitate its wider application to leadership development in organisational contexts. They developed different labels for the stages, as well as stage descriptions that relate to adults within a work environment and we have utilised them in this paper.

A detailed description of these stages can be found elsewhere (e.g. Vincent et al. 2014) but in brief, the stages of consciousness development are divided into pre-conventional, conventional and post-conventional tiers. The stages in the pre-conventional tier are characterised by the impulsivity, lack of insight and simplistic thinking normally found in young children. Older children and adults who have not developed beyond these stages may be seen as hostile or opportunistic and may be given a psychiatric diagnosis such as impulsivity disorder

or psychopathy (Hy & Loevinger, 1996). Research by Miller and Cook-Greuter (1994) estimated that around 10% of adults in Western societies function within this tier. About 75-80% of adolescents and adults operate within the three stages of the 'conventional' tier (Cook-Greuter, 2004; Miller & Cook-Greuter, 1994). All three stages are characterised by the adherence to conventional values, norms, beliefs and practices, but it is the last two stages in this tier – Expert and Achiever – that are of most relevance to the current research.

According to McAuliffe (2006) and Rooke and Torbert (2005) and Torbert et al. (2004), individuals operating from the Expert stage, try to exercise control by perfecting their knowledge in their personal and professional lives. In a professional sense this can lead to a single-minded adherence to a particular ideology, theory or management innovation, but this can also be seen in parenting and other areas of life. People operating at this stage tend to make decisions based on technical merit (disregarding the larger systems of which they are a part). Although they may be outstanding individual contributors, managers at this stage tend to expect that their subordinates will do things their way and they give feedback in these terms. They often find it difficult to collaborate or delegate, tend not to ask for feedback themselves, and can be hostile if they feel their expertise is being challenged – yet they may also be quite self-critical (Manners & Durkin, 2001; McAuliffe, 2006; Rooke & Torbert, 2005).

The Achiever stage is characterised by striving to achieve goals, the use of self-evaluated standards, self-criticism, having principled morality, mutuality in relationships and the recognition of multiple possibilities and perspectives in situations, thus enhancing the capacity for teamwork (Cook-Greuter, 2004; Hy & Loevinger, 1996; Manners & Durkin, 2001; McAuliffe, 2006; Rooke & Torbert, 2005)., Thinking and decision-making begins to moves beyond personal concerns to consider those of the wider organisation, field or society. Although Achievers

readily seek out feedback for self-improvement to better achieve their goals, they do not seek out (and tend to reject) feedback that challenges the framework from which they operate. They can thus become trapped in their paradigm (Cook-Greuter, 2004; Hy & Loevinger, 1996; McAuliffe, 2006).

Once an individual enters the first stage of the 'post-conventional' tier (Individualist), their focus tends to shift from achievement to psychological development and relationships. Growth is valued for its own sake, with feedback sought out to enhance self-knowledge rather than as a means to goal achievement and success. There is a heightened sense of individuality, and with this, a concern about emotional dependence and a greater tolerance of difference in self and others. People at this stage of development understand diverse perspectives as 'interpretations' and question the assumptions of self and others when framing problems and developing solutions. There is also growing awareness of inner conflicts and paradoxes (without requiring resolution) and a greater ease with change and uncertainty. Individualists have an increased understanding of complexity and systems thinking, as well as a broader and longer-term view of their organisation and society (Cook-Greuter, 2004; Hy & Loevinger, 1996; Joiner & Josephs, 2007; Manners & Durkin, 2001; Marko, 2006; Pfaffenberger, 2007; Torbert et al., 2004).

As development proceeds within the postconventional tier, individuals develop more integrated and complex thinking and are increasingly more able to recognise the constructed nature of reality and to critically examine existing institutional structures and conventional norms, practices, values, beliefs (Cook-Greuter, 2004). According to Cook-Greuter (2004) from an organisational perspective people operating within this tier:

“...have a broader, more flexible and more imaginative perspective on the whole organisation and its multiple contexts. They tend to cultivate relationships with many stakeholders, see promising connections and opportunities in novel places, and deal with problems in adaptive and proactive ways.” (pp.278)

Critical reviews of Loevinger’s theory have indicated substantial empirical support for the construct and the discriminant validity of both the theory and its measurement tool, the WUSCT or Washington University Sentence Completion Test (Cohn & Westenberg, 2004; Hauser, 1976; Loevinger, 1979; Manners & Durkin, 2001).

The equilibration model of consciousness stage transition

Loevinger (1976) applied a Piagetian equilibration model to the process of consciousness stage transition but did not articulate a coherent theoretical account of the processes involved and has been criticised for this (Broughton & Zahaykevich, 1988). However, Block’s (1982) adaptation of the Piagetian concepts of assimilation and accommodation to describe personality development has been implicitly accepted in research into consciousness development theory (Manners & Durkin, 2000). In this view, the stages represent plateaus in development; i.e. structures of consciousness that are in equilibrium, allowing an individual to sustain a particular understanding of the world around them. When an individual encounters life circumstances or dilemmas that disturb this understanding, he or she is motivated to restore equilibrium. This may be achieved through less disruptive (thus, more likely) paths involving discounting the information, selective inattention and/or the use of attributional processes to assimilate the discrepant information so that it does not challenge the existing world view. Alternatively, equilibrium may be restored by deconstructing, reorganising and/or creating new structures of consciousness to accommodate the discordant information, thus

creating the potential for a stage transition as the individual integrates increasingly complex experiences and these changes build up over time (Hy & Loevinger, 1996; Kegan, 1982; Manners & Durkin, 2000).

Interventions to promote consciousness development

As mentioned previously, despite the growing interest in promotion of adult consciousness development within in the leadership and management field, empirical research into the design and effectiveness of intervention programs remains sparse (McCauley et al., 2006). Manners and Durkin (2000) constructed a conceptual framework for processes involved in adult consciousness development based on their review of the theoretical and research literature on consciousness, moral and personality development, including intervention studies concerned with promoting consciousness development in adulthood,. They suggested that interventions designed to promote such development should not only obviously be disequilibrating for the individual's current stage of consciousness (i.e. elicit reflection on aspects of reasoning at a higher stage) but should offer experiences designed to be emotionally challenging (but open to positive interpretation), interpersonal in nature, personally salient and emotionally engaging.

Manners, Durkin and Nesdale (2004) designed an intervention program with these characteristics targeting people at the Expert stage of consciousness. Utilising an experimental design, they found a significant increase in consciousness in participants who had taken part in the intervention compared to no effect for those in a matched wait list control group. Vincent et al. (2014) compared community leadership programs (CLPs) offering challenges that aligned with the Manners and Durkin (2000) framework with two control programs. The CLPs successfully promoted consciousness development to the last conventional stage or the first

postconventional stage (depending on the stage of the individual at program entry) providing further support for Manners' and Durkin's (2000) conceptual framework.

The current study of participants' subjective experiences presented a different and triangulating opportunity to test this framework, by exploring whether participants who had transitioned a stage of consciousness and noticed changes in themselves explained them in terms of disequilibrating interpersonal, emotionally engaging or personally salient aspects of their programs.

Individual readiness factors for consciousness development

Bartone et al. (2007), Manners and Durkin (2000) and Palus and Drath (1995) have all argued that the consciousness development process is likely to be mediated by enduring psychological and personality factors, in addition to other state, environmental and sociocultural factors. Such factors typically operate interdependently, and when considered together, may allow an assessment of individual's 'readiness for development' (Day, Harrison & Halpin, 2009; Palus and Drath, 1995). As McCauley et al. (2006) noted, individual difference or contextual variables have been studied extensively in the leadership field. Aside from their impacts on leadership effectiveness, they account for the common finding that individuals exposed to the same developmental challenge or experience do not necessarily develop equally (Day et al., 2009). However, there has been little consideration of such variables in the limited research into adult leadership and consciousness development to date (McCauley et al., 2006).

A comprehensive discussion of the many sociocultural factors (societal norms, rules and expectations) potentially influencing developmental readiness is beyond the scope of this paper. However, some salient trait, state and environmental readiness factors are briefly

described below, in relation to how they might mediate development within interventions designed to promote consciousness development, and thus, their relevance to the current study. It is acknowledged however that there is a great deal of overlap and interdependence between these factors and so distinctions among them are often not clear cut (Palus & Drath, 1995).

Personality-related readiness factors

Manners and Durkin (2000) argued that certain personality factors may mediate consciousness development by influencing the degree of exposure to potentially disequilibrating life experiences; whether these are perceived as disequilibrating; and, if so, whether or not this is resolved by assimilation or accommodation. Having reviewed research into personality development in adulthood, Manners and Durkin suggested that openness, self-acceptance, self-efficacy, flexibility, the desire for challenge and internal locus of control may all enhance the potential for consciousness development. Bartone et al. (2007) added reflectivity, achievement orientation and hardiness as additional mediating possibilities.

Although many of the personality factors proposed as mediators of consciousness development have not been tested in that specific context, several studies have identified positive relationships between consciousness development and some NEO-PI personality factors, particularly 'Openness to Experience' (Einstein and Lanning, 1998; Hogansen & Lanning, 2001; Kurtz & Tiegreen, 2005; Morros, Pushkar & Reis, 1998; Wright & Reise, 1997), and with Intuition on the Myers Briggs Type Indicator - MBTI (Bushe & Gibbs, 1990; Vincent et al., 2013). Furthermore, Vincent et al. (2014) found that more extensive psychosocial challenges within leadership programs were required to promote consciousness development

to postconventional levels in those with a Sensing preference on the MBTI when compared to those with the opposite preference (Intuition).

The current study provided an opportunity to explore this latter finding further by investigating whether those with a Sensing preference who had shifted a stage of consciousness within a leadership program actually identified psychosocial challenges in general, or any in particular, as more important to their development when compared to those with a preference for Intuition. A better understanding of how such preferences may mediate the effect of interventions designed to trigger consciousness development could facilitate a more tailored approach (as opposed to 'one-size-fits-all') that addresses the barriers to higher stage development for some trainees.

State readiness factors

State readiness factors are changing characteristics of the individual that may affect consciousness development at a given time. These include the current developmental stage and its stability, the state of satisfaction with various aspects of life, acute problems such as depression, anxiety or other illness and possibly also chronological age (Palus & Drath, 1995).

The current stage of consciousness

The current developmental stage of an individual may influence development depending on how well this is matched the design of the intervention program. Manners and Durkin (2000) undertook an extensive review of the published and unpublished studies on intervention programs designed to promote adult consciousness development and concluded that in order to be effective, the latter must be structured at one or two stages above the stage of the individuals it is targeting. This was tested and supported by Manners et al. (2004) in research utilising an experimental design. They found their specially-designed intervention was

only effective in promoting consciousness development in those for whom the program content was structured at least one stage higher. In contrast however, it is likely that an intervention that is structured too far above an individual's range of understanding may seem absurd, overwhelming and/or threatening and may elicit hostility or indignation, neither of which is likely to be conducive to consciousness development (Day et al., 2009; Garvey-Berger, 2012; Palus & Drath, 1995). Assessing and matching the developmental stage of an individual with the design of the intervention should therefore be an important consideration in terms of assessing readiness for development.

Consciousness stage stability

The stability of an individual's stage of consciousness may also influence their readiness for development – and therefore, the outcome of interventions to promote such development. Consciousness development does not appear to occur in whole leaps, so although a shift may appear as sudden and dramatic, considerable preparation will likely have taken place beforehand (McAuliffe, 2006). Dunsky (2002) integrated the views of various theorists to develop a description of the consciousness transition process as a series of phases – see Table 5.1. The first phase is 'Stability' in which there are minimal fluctuations. Interventions that offer disequilibrating challenges to this stability may help to potentiate the developmental process (Palus & Drath, 1995) – perhaps provoking movement towards the next phase, which Dunsky (2002) labelled 'Anomaly'.

The individual enters the 'Anomaly' phase as he or she begins to experience persistent challenges to stage stability. These gradually build up, leading to cognitive dissonance, confusion, frustration and denial (or what Palus and Drath (1995) have described as 'global dissatisfaction') as the individual continues to struggle to assimilate the information into

existing structures. Interventions that offer new perspectives for a person in this phase of transition may help them to fully confront the limitations of their current stage to the point where assimilation processes can no longer be maintained (Manners & Durkin, 2000) and they begin to move into the next transition phase. Palus and Drath (1995) have noted however, that such interventions may not be viewed particularly positively by individuals in the Anomaly phase, as they may (necessarily) result in greater frustration and confusion.

Table 5.1: Integrated Consciousness Stage Transition Phase Descriptions

Transition phase	Typical characteristics
Stability	Stable dynamic balance; high coherence; minimal fluctuations; no observable change vector
Anomaly	Discrepant information, cognitive dissonance; ill-defined sense that something is wrong; negative affect possibly including anger, frustration, depression, denial, impatience; loss of meaning; confusion; failure; questioning; increasing fluctuations; efforts to assimilate are dominant
Possibility	Understanding and new possibilities begin to emerge; experimentation; disorganisation; hesitation; self remains identified with, but begins to disembed from (let go of) current balance; ongoing uncertainty, ambivalence and sometimes guilt; pull of new attractor begins to be felt; beginning of accommodation
Tipping	Contours of emerging balance take shape; identification shifts to the emerging balance; fluctuations begin to diminish; affect becomes more positive; new attractor becomes dominant; old pattern may be pushed away
Consolidation	Integration of new structure with old; extension to additional areas of self and others
New stability	Stable adaptation achieved at a new level

NOTE: From *Transitions in the structures of consciousness* (p. 67), by H. Dunsky, 2002 Saybrook Graduate School and Research Centre, San Francisco: Unpublished Master's thesis. Copyright 2002 by Halim Dunsky. Reprinted with permission of the author.

Once an individual begins to let go of their current stage and accommodate some of the new information as new possibilities begin to emerge, they are said to be in the 'Possibility' phase. This is followed by the 'Tipping' phase, which occurs once the new stage becomes dominant and the old pattern is rejected. For those in the 'possibility' or 'tipping' phases, interventions to help promote development of consciousness to the level the individual is already moving into might be viewed very positively as such individuals experience the joy of a new way to understand themselves and the world (Palus & Drath, 1995).

The 'Tipping' phase is followed by a phase of 'Consolidation' in which the individual applies the new frame to more situations, before finally entering a new phase of stage stability. Interventions that assist the consolidation process through exposing individuals to more situations to which their new frame can be applied may be useful and appropriate for individuals in this phase (McAuliffe, 2006), and may help them 'awaken' fully into their new stage of consciousness (Palus and Drath, 1995).

Research into attempts at life change (re-evaluating goals and life-meaning) might have relevance to the consideration of consciousness stage stability. Such research has found that stories of successful attempts at life change are more likely to mention intense emotional experiences, external threats and focal events - the latter often being described as 'the straw that broke the camel's back' (Heatherston & Nichols, 1994). These often culminate in a 'crystallisation of discontent' in which "...contradictory events link together to form a large pattern of negative, dissonant thought" (Baumeister, 1994, p304) or a 'crystallisation of desire', in which a desired future becomes clearer and the individual is drawn towards it (Bauer, McAdams & Sakaeda, 2005). Bauer et al. (2005) found that most stories actually contain elements of both discontent and desire, but those in which the predominant reason

for the life change was to move towards something desirable in the future (rather than primarily wanting to escape from a bad situation) were associated with greater wellbeing.

It is possible that this crystallisation process might also be a feature of the consciousness stage transition process (particularly in terms of how Dunsky (2002) described the movement through the 'Anomaly', 'Possibility' and 'Tipping' phases). As far as we know, however, this has never been specifically researched. The current study represented a potential opportunity to explore whether descriptions of crystallisations of discontent or desire were a prominent feature in the narratives of individuals who had recently undergone, or had moved close to undergoing, a shift in consciousness. This information could provide a useful insight into, and support for, the equilibration process of consciousness development, as well as helpful clues for assessing developmental readiness and informing program design.

Age-related readiness factors

Although there is evidence that consciousness level stabilises for most individuals by early adulthood (Cohn, 1998; Cook-Greuter, 2004; Truluck & Courtenay, 2002), Palus and Drath (1995) and Helson, Mitchell & Moane (1984) argued that chronological age might also be an important readiness factor for consciousness development in the sense that adherence (and non-adherence) to sociocultural norms may help to channel such development - particularly around the ages of 30, 40 and 50. Palus (1993) found clusters of transformative life experiences reported at around these ages, and concluded that "...social expectations frame these "decade age markers" as a kind of developmental precipice, establishing in some cases a self-fulfilling prophecy for transition" (Palus & Drath, 1995, p9). Similarly, Van Velsor and Musselwhite (1986) argued that a 'midlife crisis' occurring in the early to mid-40s and characterised by self-doubt and personal re-examination triggered by, for example, marriage

crises, career burn-out or retrenchment, could be a trigger for development. These proposals were not based on research specifically on consciousness development, but the current study presented an opportunity to explore the influence of age and age-related triggers in this context.

Environmental readiness factors

The family, workplace and community environments in which an individual is situated may influence an individual's readiness for consciousness development by providing support for, or challenge to, existing meaning structures (Manners & Durkin, 2000; Palus & Drath, 1995). Pfaffenberger (2007) found descriptions of overcoming life challenges were almost ubiquitous in the stories of consciousness growth in her study. This is consistent with earlier research by Bursik (1991), Helson (1992), Helson and Roberts (1994), Helson and Wink (1987) and King (2001) which found that successfully coping with complex and ambiguous life challenges is associated with an increase in consciousness development.

A growing body of literature is suggesting ways in which workplace challenges and specific workplace-based interventions may be important in contributing to consciousness development (Ghosh et al., 2013; Joiner & Josephs, 2007; Palus & Drath, 1995; Rooke & Torbert, 2005; Torbert et al., 2004; Valcea et al., 2011). However, again, there has been very little empirical research that has tested this. Palus and Drath (1995) suggested that Musselwhite's (1985) findings in relation to the transfer of learning from a leadership development program might be applicable to readiness for consciousness development. The latter found that job promotions (particularly moving into a first management role, moving from manager to executive and becoming the head of an organisation) and other major changes in work responsibilities that occurred 6-12 months before the program had a positive

impact. However, if these occurred immediately after the program (from 1 to a few months) then this was considered to have a negative impact on learning transfer. Interestingly, it was also found that being dissatisfied with work and dissonance in the work environment (such as financial problems or restructuring) had a positive impact on learning transfer – as did returning to a supportive organisational climate after the program and having a supportive spouse. The need to travel a lot for work, being newly married, having a baby, illness or injury of spouse (or self) and personal financial problems had a negative effect. As mentioned above, these findings related to learning transfer rather than consciousness development per se, and so the current study presented the opportunity to explore whether individuals who had recently transitioned a stage of consciousness (or had moved substantially towards such a transition) were more likely to describe particular job and other life challenges as having an influence on their readiness for development than those who had not. Such information could be useful when considering candidates for developmental opportunities.

Studies of consciousness growth from the subjective perspective of the individual

Our study was designed as a preliminary exploration of the experience of consciousness development and factors influencing readiness for such development from the perspective of individuals who had recently transitioned a stage (or come close to doing so). To date, there appear to have been only two studies that have explored the subjective experience of consciousness development and neither of these have done so in close proximity to the transition or within the context of a leadership development program.

Marko (2006) explored the experience of consciousness development with the aim of identifying ‘facilitative agents’ (‘ah-ha moments’, insights and visions) that triggered this. He

undertook structured interviews with 21 people who scored at the Individualist stage or higher on the WUSCT. He deliberately selected these later stage participants as he wanted them to reflect on tipping points for development across the spectrum of stages through which they had developed (i.e. not specifically on their most recent experience of development). He found evidence of such facilitative agents that stood out as memorable incidents in participants' stories (often occurring under stress, in a creative or reflective state or, most commonly, outside of normal waking consciousness). However, he did not find any particular format that was characteristic of such experiences either for particular stages of development or for participants in general.

Pfaffenberger (2007) undertook a qualitative study with 22 people who scored at the Individualist stage and above, and compared them with 6 people who scored at the Achiever stage. Her aim was to understand how people at higher levels of development account for their growth in terms of events, processes, factors and activities. Like Marko, she did not restrict participants to reflection on their most recent experience of development, asking instead that they reflect on the kinds of experiences that had shaped them, why these were important and whether any specific events stood out as turning points. She found that the postconventional participants had much greater complexity in their narratives (expressing a wide variety of interests and concerns) and were also characterised by descriptions of introspection and inner awareness – such as finding what is right for them and following their own inner sense of direction in life as a core purpose (as opposed to material gains or other conventional achievements). In contrast, conventional participants described growth in terms of responding to demands made on them in life. Interestingly, when asked about growth in an open-ended way, postconventional participants in this study rarely mentioned distinct turning points, but

talked more generally about processes and challenges such as parenting, living in a foreign culture and job promotions that led to the discovery of new parts of themselves and emotions that had previously been denied. The latter contrasts with the findings of Marko (2006). Furthermore, Pfaffenberger (2007) concluded that no one particular activity or process was sufficient for attaining postconventional development; what appeared to promote growth for some did not for others.

The current research

The current study built on the work of Marko (2006) and Pfaffenberger (2007) in several ways. Firstly, we elected to maximise accuracy of recall by focussing on recent changes – asking participants to reflect only on changes they had noticed in themselves during the course of a community leadership program (CLP), and to consider triggers for these changes that had operated during the program and in the 12 months prior to participation. Secondly, we set out to explore the alignment of these stories of changes and triggers with Loevinger’s theory of consciousness development, Manners’ and Durkin’s (2000) framework for interventions to promote development, and other relevant research. Thirdly, we incorporated and compared not only the responses of those who had shifted a stage of consciousness during the course of the CLP, but also those who had not, and specifically those who had come close to doing so and were thus likely to be either in Dunsky’s (2002) ‘possibility’ or ‘tipping’ phases. Finally, with our particular focus on potential readiness factors for consciousness development, we aimed to contribute to the small body of empirical research on promoting consciousness development (particularly development to the postconventional tier) and, in particular, to inform the design of, and selection of participants for, programs supporting such development.

Context for the study

This study was part of a larger research project involving 11 community leadership programs (CLPs) and their participants around Australia. Although Australian CLPs have not been deliberately designed to promote consciousness development, they nevertheless offer experiences that align with Manners' and Durkin's (2000) framework for interventions designed to do so. They have been found to successfully trigger development to the last conventional stage (Achiever) and the first postconventional stage (Individualist) (Vincent et al., 2014). Some CLPs (which we labelled as 'enhanced') include additional psychosocial challenges, and these programs were more successful in promoting consciousness development in those participants with a Sensing preference on the MBTI (Vincent et al., 2014). CLPs recruit participants in very diverse business, government and not-for-profit leadership positions, who apply voluntarily and who have demonstrated a commitment to their community. A fuller description of CLPs, and the recruitment process for them, can be found in Vincent et al. (2014). Participants for this study were recruited from three of the enhanced CLPs included in the larger research initiative immediately prior to their completion of the programs.

The first author works in the leadership development field and is involved in the design and delivery of a CLP. Quantitative data from the latter were included in the larger study. However this program was excluded from the third (qualitative) phase of the project to reduce the possible impact of allegiance factors on the researcher and participants. Data for this phase of the study were collected from programs that operate in different Australian states from that in which the first author works. In addition, other measures were implemented to strengthen the trustworthiness and validity of the data analysis (see section 3.4) (Suzuki, Ahluwalia, Mattis & Quizon, 2005).

Research questions

The research questions were as follows:

Question 1: Do shifters describe the changes they have noticed in themselves during the course of participating in the program ways that are broadly consistent with Loevinger's (1976) developmental theory (i.e. in terms that align with the stage of development to which they have transitioned and as an experience of growth in personal autonomy, flexibility, self-awareness, interpersonal awareness and skill, capacity for reflection, tolerance for ambiguity and difference, and a decline in defences)? If so, how do such responses of shifters compare with those of movers and non-shifters?

Question 2: Do shifters describe the impact of the program in terms that are consistent with the conceptual framework for promoting consciousness development articulated by Manners and Durkin (2000) – i.e. that it provided disequilibrating interpersonally, emotionally and personally salient experiences that challenged their ways of thinking about themselves and the world. If so, are there differences based on the MBTI Sensing or Intuition preference of shifters (for example, do those with a preference for Sensing mention the psychosocial elements of the program as more challenging), and how do the responses of shifters compare with movers and non-shifters?

Question 3: What is the nature of any life events in the year prior to, or during, the program that shifters and movers believe may have influenced their readiness for development and are shifters and movers more likely than non-shifters to mention such life events? Also, are there any differences between shifters with an MBTI preference for Sensing and those with a preference for Intuition in this regard?

Question 4: What significance, if any, do shifters, movers and non-shifters place on the timing of the program in their lives in terms of catalysing any changes they notice in themselves? Do shifters more frequently describe the timing of the program in terms of 'crystallising' their discontent or desire (and thus the need to move away from an undesired past or towards a desired future)? Do they more frequently describe the timing of the program in their lives as aligning with any social expectations that frame "decade age markers" or with a 'midlife crisis' occurring in the early to mid-40s?

Materials and Methods

Participants

The study involved a survey of graduates exiting from three community leadership programs (two based in Australian state capitals and one in a large regional centre). A total of 84 responses were received from a possible 93 graduates (90% response rate). The three programs were selected for practical reasons - each had a large number of participants and routinely conducted a survey-based program evaluation for exiting graduates into which our questions could be easily inserted. There were no significant differences between the programs in terms of the number of people who had transitioned a stage of consciousness by the end.

Survey respondents were divided into 'shifters' (i.e. those who had transitioned a stage of consciousness during the course of the program as measured by the WUSCT), 'movers' (those who were 1 or 2 points away on their final WUCST from shifting to the next consciousness stage and had 0-1 responses rated at that stage on their first WUSCT completion – all in this group were at Achiever and thus moving towards the first post-conventional stage) and 'non-shifters' (i.e. all other respondents). Within the shifter group, those who had made a

consciousness stage transition within the conventional tier were described as 'conventional shifters' (all but one of these had shifted from Expert to Achiever). Those who had shifted from a conventional stage into the postconventional tier or who shifted within the postconventional tier were described as 'postconventional shifters (all but one of these had shifted from Achiever to Individualist). There were 28 shifters, 13 movers and 43 non-shifters. The mean age of shifters was 37.93 (SD=5.47) with a range of 28-46 years and 60.7% were female. This compared with the mover group, which had a mean age of 40.23 (SD=6.25) with a range of 31-53 and was 53.8% female and the non-shifter group which had a mean age of 40.49 (SD=5.77) with a range from 30-53 years and which was only 27.9% female. The proportion of females in the combined shifter and mover groups was significantly greater than that in the non-shifter group ($p<.008$). However, although this is an interesting and important difference, the magnitude of the gender difference was not reflected in the larger study and further discussion is beyond the scope of this paper.

All groups were highly educated, with 85.6% of shifters, 83.3% of movers and 88.1% of non-shifters having a university undergraduate degree or postgraduate university qualification. Only one person in each of the shifter and mover groups (and none in the non-shifter group) had not completed high school. English was the first language of 92.9% of shifters, 92.3% of movers and 95.3% of non-shifters and only one person in the shifter group (and none in the other groups) identified as being of Aboriginal or Torres Strait Islander descent. Intuition (as measured by the Myers Briggs Type Indicator) was the preference of 57.1% of shifters, 53.8% of movers and 65.1% of non-shifters. Table 5.2 shows the stage of consciousness of participants on program exit for each group.

Table 5.2: Consciousness stage on program exit by group

Level of consciousness	Shifters (n=28)	Movers (n=13)	Non-shifters (n=43)
Expert	3.6% (1)	-	20.9% (9)
Achiever	25% (7)	100% (13)	58.1% (25)
Individualist	67.9% (19)	-	20.9% (9)
Strategist	13.6% (1)	-	-

Measures

The Washington University Sentence Completion Test (WUSCT).

Stage of consciousness was determined using the WUSCT (Hy & Loevinger, 1996)

Respondents complete a series of 36 sentence stems selected for eliciting various aspects of consciousness development, the premise being that a person's choice of sentence content and structure reflects the way they see the world (Cook-Greuter, 1999). Forms for men and women differ only in the use of personal pronouns to make stems personally relevant. Responses are scored using a detailed scoring manual (Hy & Loevinger, 1996) and combined using ogive rules to place the respondent in one of the eight stages of development. We utilised the ogive rules modified by Cook-Greuter (1999); they have higher cut-off numbers for assigning postconventional stages (Individualist and above). We split the test in half to produce two abbreviated versions to prevent the measurement error effects found in repeated use of the full test (Redmore & Waldman, 1975).

Research has provided substantial support for the reliability of the full version of the WUSCT (Loevinger, 1979; Manners & Durkin, 2001). High correlations between the two split halves of the forms have been found, with a similar correlation between each half and the 36-item version (Novy & Francis, 1992; Novy, Blumentritt, Nelson & Gaa, 1997). Various studies

that have compared the WUSCT with other measures of personality development found that it compared favourably (Manners and Durkin, 2001).

The Myers Briggs Type Indicator (MBTI).

The MBTI is one of the most popular inventories used to measure personality constructs outside the realm of academic psychology (Bayne, 2003; Capraro & Capraro, 2002; Rushton, Morgan, & Richard, 2007). We utilised the Self-Scorable Form M on which respondents select one of two options for each of 93 items to identify their preferences on four pairs of dichotomous constructs that were specified or implied in Jung's (1921) theory of personality and describe opposite, but equally valid, ways in which we use our minds (Myers, Briggs, McCaulley, Quenk & Hammer, 2003). The only preferences of interest in the current study were Sensing and Intuition because, as reported in Vincent et al. (2013; 2014), no other preferences or combinations thereof were found to be associated with consciousness development. The Sensing-Intuition dichotomy indicates differences in the way people process information. People with a preference for Sensing focus on the present, are factual, concrete thinkers and prefer to process information through the five senses. Those with a preference for Intuition prefer to process information through patterns and impressions, with a focus on the future and its possibilities. They are abstract thinkers.

The MBTI was utilised in this study because it is non-threatening (acknowledging that all preferences have strengths and weakness' but all are equally valid) it was quick and easy to explain as part of an 'ice-breaker' activity for new program groups, and because it was already in use in many of the programs. Its reliability and validity have been shown to be generally satisfactory (Gardner & Martinko, 1996) and it has strong internal consistency and test-retest reliability (Capraro & Capraro, 2002).

Survey

Our questions were inserted at the beginning of the general program evaluation survey for each program included in the current study. These were designed to elicit information about (1) differences respondents had noticed in themselves and the way they were operating (both personally and professionally) since the program began; (2) whether they attributed any changes to specific design elements or components of the CLP; (3) the nature of any professional or personal challenges they had faced in the year before or during the program that may have influenced their readiness for development; and, (4) their views about the appropriateness of the timing of the program in their life.

Procedure

This project received ethical approval from the University of Adelaide Human Research Ethics Committee. Participants gave informed consent to take part in the study. They completed the WUSCT (first 18 stems) and MBTI on program entry and the WUSCT (second 18 stems) on program exit (this was at 10 months for two of the programs, and at 24 months for the other). All WUSCT protocols were scored by a single trained scorer. Scoring of 10% of the protocols within the larger study was checked by another expert scorer. The Kappa Measure of Agreement value was 0.79 ($p < .0001$).

The survey questions were sent out via a web-based survey service immediately prior to the final program session. At the time of completing the survey, participants had not completed the second half of the WUSCT and were therefore not aware of whether they had transitioned a stage of consciousness according to the test. Survey responses from all participants were collated by the program leaders and sent to the first author in electronic form.

Data analysis, trustworthiness and validity

Data analysis was carried out by the first author. A qualitative data analysis software package was used to manage and analyse the survey data and a combination of research-driven and data-driven coding was undertaken. Question 1 was designed to elicit data about the experience of a shift in consciousness stage and assess its alignment with the theory about what aspects of the 'self' change as consciousness grows, research-driven codes were set up accordingly to look for the latter (namely the experience of growth in personal autonomy, self and interpersonal awareness, capacity for reflection, tolerance for difference and ambiguity, flexibility and decreased defensiveness). Question 2 was designed to elicit data about the impact of the program and its components and test whether these aligned with the conceptual framework for processes involved in adult consciousness development of Manners and Durkin (2000). Accordingly, theory-driven codes were established that matched Manners' and Durkin's specifications for interventions designed to promote such development – namely that they are interpersonal in nature, personally salient and emotionally engaging for participants. Data-driven codes were established to categorise other themes that emerged. Questions 3 and 4 were designed to elicit information about other influences that may have had an impact on 'readiness to change' (i.e. shift consciousness) and so some limited research-driven codes were used (namely 'crystallisation of discontent' and 'crystallisation of desire'). However, data-driven codes were used to categorise the many other different types of experiences respondents described.

In order to verify the trustworthiness of the data coding, inter-rater reliability was assessed. Seven complete and randomly-selected surveys were coded for comparison by another researcher experienced in the use of content analysis and in Loevinger's theory of

consciousness development, but not involved in this study or in the community leadership development field. The Kappa Measure of Agreement value was 0.78 ($p < .0001$).

In addition, in order to strengthen the validity of the researcher's comparisons between different groups within the study, quantitative analysis was undertaken using Fishers exact test. This procedure calculates an exact probability value for the relationship between two dichotomous variables, as found in a two by two contingency table, and is used instead of the Chi-square test for independence when sample sizes are small or there is a small value (less than five) in one of the cells (Siegel & Castellan, 1998).

It should be noted that the sample size for each analysis varied, as not all respondents answered all questions.

Results and Discussion

Question 1 - descriptions of development

In alignment with theory and research on consciousness development, 68% of shifters described the differences that they had noticed in themselves since the program began in terms of increased interpersonal awareness and skill, and 68% described an increase in personal autonomy. Other important themes were increased self-awareness (46%), increased capacity for reflection (25%), increased tolerance for difference (18%) and increased flexibility (18%). In addition, 11% said they had an increased tolerance for ambiguity, and 11% said they had become less defensive. A strong data-driven theme that emerged was an increased awareness of, and knowledge about, community issues (36%). The latter is consistent with the nature of CLP programs, in that they focus on community issues.

In general, the shifters descriptions of changes they had noticed in themselves tended to reflect the stage of development to which they had transformed - bearing in mind that most of these respondents would have only recently entered their new stage and so their responses would be unlikely to fully reflect the latter. Although similar themes were expressed in both conventional and postconventional shifters, the descriptions of the postconventionals frequently reflected the greater cognitive and psychological complexity associated with a shift to the Individualist stage.

Examples of the themes that were most prevalent in the data, as well as the differences in the descriptions between conventional and postconventional shifters are provided in the following sections (please note that the names of participants have been replaced with pseudonyms).

Interpersonal awareness and skill

Conventional shifters frequently mentioned that they gave greater consideration to the impact of their actions on others and were now more open to discussion and more inclusive of others in decision-making. These are typical characteristics of the move from the Expert to the Achiever stage in which teamwork and agreements reached through consensus gain much more focus in the drive to accomplish goals:

Karen (conventional shifter): Yes. I have become more of a 'big picture' thinker. I assess the impacts of my actions on people much more than I would have previously.

Freddy (conventional shifter): Yes - I find myself more open to discussion and inclusive of others in my decision making process.

Quella (conventional shifter): *I consider how my performance at work affects others and reflect on what leadership skills/styles I can use in particular situations to make my team operate more effectively.*

Postconventional shifters responses often reflected greater complexity, taking more perspectives and variables into account and developing a more nuanced interpersonal strategy, as well as a decreased need to be 'in control'- thus more comfort with ambiguity. Several also mentioned a focus on the development of others:

Penny (postconventional shifter): *I believe I am more aware of subtle ways people express themselves and reading and interpreting these when interacting with people.*

Marnie (postconventional shifter): *I am more considered in the way I approach a team-oriented decision. I now reflect more on the personalities involved, the 'accepted' behaviours, the networks and channels that are in play and the broader outcome I am seeking.*

Cara (postconventional shifter): *The key difference is that I am more likely to step back and allow/enable other people or processes to take control than feel I need to be in control...This approach has helped me step out of my comfort zone, accept new ways of thinking and better mentor and coach.*

Reports of increased empathy also emerged as a data-driven sub-theme of 'increased interpersonal awareness and skill' in 23% of shifters:

Beatrix (conventional shifter): *...[I have become] a much more emotional person. This is from a personal perspective and external - e.g. feeling others pain.*

Kieran (postconventional shifter): *Greater amount of empathy toward all people and ensuring I have an open mind when talking/meeting with people. I now have greater appreciation of the daily challenges faced by people from all backgrounds.*

Increased personal autonomy

An increase in personal autonomy was frequently expressed as a growth in self-confidence, self-belief and/or empowerment. Again, however, the postconventional shifters tended to describe this in ways that were more psychologically complex. These included an increased sense of comfort with individuality and the expression of a more authentic self, moving away from the sometimes excessive sense of responsibility for others that can be associated with the Achiever stage, and a deliberate move towards balancing work and time for self and relationships (including the ability to say 'no'). The responses below provide examples of the differences between conventional and postconventional shifters:

Quella (conventional shifter): *Overall I feel more confident and ready to take on more responsibility at work.*

Ian (conventional shifter): *My confidence in my own abilities has grown.*

Edward (postconventional shifter): *I am more myself at work and happy with being myself. I remember late last year being given feedback that I come across as casual but I think now that is who I am and I don't want to put on a mask...I have really looked to engage a better work/home/self/relationship and, while balance is relative, I feel comfortable with the mix. My family is also amazed that I am making time for stuff (even if I am busier, I feel happier with what I am achieving and I am prepared to say 'no').*

Hamish (postconventional shifter): *I have...had a large transition (personally and professionally) away from people-pleasing into a space where I can maintain my personal morals (as a humanitarian) whilst not overcommitting emotionally to others. This is in the form of activism, political lobbying and community development on a more broadsheet level. I am learning to moderate my approach, yet build confidence and understanding that I am an activist. I have the skills and knowledge to work on directly influencing the system.*

Several postconventional shifters noted that they had begun to develop a stronger sense of the values that were important to them. Some had also begun to question the impact they were making in their lives:

Olivia (postconventional shifter): *[The program and other life challenges] made me reflect on what I want out of life and if I am making the right choices for me or just doing what is expected.*

Jake (postconventional shifter): *I have also really started questioning the impact and difference my job and wider life is making and I am motivated to do more.*

Other changes identified

There are several examples of the theme of increased self-awareness in the quotes above. This was often expressed as a better awareness of strengths and weaknesses:

Penny (postconventional shifter): *Just being in an environment with other successful business people and sharing experiences and observations of each other's strengths and weaknesses has made me more aware of my own...*

Several of the quotes above have also provided examples of the theme of increased capacity for reflection. The following quotes reflect this theme more explicitly:

Colin (conventional shifter): *I have certainly noticed my ability to pause in moments of stress...allowing for moments of contemplation.*

Leah (postconventional shifter): *I am listening more deeply and taking more time to make decisions.*

Similarly, several of the quotes above have demonstrated the theme of increased tolerance for difference. This was a theme expressed mainly by postconventional shifters:

Jake (postconventional shifter): *I'm certainly more understanding of people in circumstances more difficult to myself - greater empathy!...I am very middle class and thought that my way was the only right way and that people who behaved differently from me were deliberately making choices to be anti-social. But the program brought home the behaviour patterns and the reasons behind them...*

Marnie (postconventional shifter): *The impact on me has been to learn to accept people's weaknesses (still struggling to accept my own as well) and look beyond immediate experience to how it typifies social behaviour/values - i.e. the obstacles to overcome in effecting positive change in societal values.*

The theme of increased tolerance for ambiguity was expressed exclusively by postconventional shifters:

Gina (postconventional shifter): *I now feel more centred, knowing that as a leader it's OK to be out of your depth as long as you stay true to your values and seek others' support.*

Comparisons with movers and non-shifters

All movers and 89% of non-shifters had also noticed changes in themselves since their programs began. Their responses tended to fit the same major themes as those of the shifters – although in general with a lower percentage of respondents data coded under each (see Table 5.3). There was a significant difference ($P < .001$) between the proportion of shifters who mentioned ‘increased interpersonal awareness and skill’ (68%) and the proportion of non-shifters (22%) who did so. There was also a significant difference ($P = .03$) between the proportion of shifters who mentioned examples of increased personal autonomy (68%) and the proportion of non-shifters who did so (39%), as well as between the shifters who mentioned increased self-awareness (46%) and the non-shifters who did so (22%) - $P < .04$. Interestingly, responses from the movers were in-between those of the shifters and non-shifters (and not significantly different from either). This suggests that these changes are not an artefact of having participated in a particular kind of leadership development program, but are associated with a consciousness stage shift – or the move towards one.

Question 2 - descriptions of program impact

Those who had experienced a shift in consciousness stage during the course of the program described the program impact in terms that were consistent with the conceptual framework for promoting consciousness development articulated by Manners and Durkin (2000). For example, 79% of shifters described the interpersonal nature of the program as being important in catalysing the changes they had noticed in themselves. In general, this was articulated in terms of important supportive relationships formed, sharing experiences with others and the exposure to diverse viewpoints (67%). However, some specific interpersonally-based components of the programs were also identified, such as the group project work (21%); coaching (7%), peer review (7%) and sessions with guest presenters (7%). This is, also

consistent with the finding above that 93% of shifters had noted the development of their interpersonal awareness and skill over the course of participating in the programs.

Table 5.3: Developmental changes: Group comparisons

Themes	Shifters (n=28)	Movers (n=13)	Non-Shifters (n=46)
Increased interpersonal awareness and skill	68% (19)	38% (5)	22% (10)***
Increased personal autonomy	68% (19)	54% (7)	39% (18)**
Increased self-awareness	46% (13)	23% (3)	22% (10)*
Increased capacity for reflection	25% (7)	15% (2)	7% (4)
Increased tolerance for difference	18% (5)	23% (3)	11% (5)
Increased flexibility	18% (5)	-	-
Increased tolerance for ambiguity	11% (3)	15% (2)	4% (2)
Decreased defensiveness	11% (3)	15% (2)	4% (2)
Increased knowledge of community issues	36% (10)	23% (3)	22% (10)
No changes	-	-	11% (5)

** $P < .001$; * $P = .03$; $P < .04$ (comparisons with shifters)

In coding data for the research-driven themes of ‘personal salience’ and ‘emotional engagement’ (two characteristics specified by Manners and Durkin (2000) as being important in programs to promote consciousness development) it was found that there was an extremely high overlap between the two, with much of the same pieces of data being coded under both themes. It was therefore decided to combine these codes. In doing so, it was found that 64% of shifters noted the personally salient and emotionally engaging nature of the program as being important in catalysing the changes they had noticed in themselves.

A data driven theme that arose as an important factor in supporting the changes shifters had noticed in themselves was the space for reflection that the program provided (14%).

The interpersonal nature of the program

As mentioned above, the challenge and support offered by the interpersonal nature of the program tended to be expressed in terms of being exposed to a diversity of viewpoints, supportive relationships and sharing experiences with others:

Karen (conventional shifter): *It is the discussion with others (particularly in my syndicate) and the exposure to different leaders that has helped me learn and develop my skills. More so, I was in an environment that allowed my views to be challenged by others and this allowed me to either cement or change my views.*

Ian (conventional shifter): *I was fortunate enough to form a close network from the group of 3-4 like-minded people. This has enabled me to use them as a sounding board for issues that have arisen, both personally and professionally [and] to get a better perspective or see things in a different light....*

Jody (postconventional shifter): *The program itself as well as the relationships I formed throughout really helped me get through the emotional struggle I was facing.*

Adam (postconventional shifter): *...seeing the similarities and challenges faced in other sectors/fields. Individual leadership journeys not too dissimilar to my own have impacted me.*

The interpersonal challenge of working with a very diverse group of people in a group project was identified as particularly important amongst shifters (all of them postconventional):

Kieran (postconventional shifter): *The research project provided a great opportunity to work with a very diverse group of people... [It also] provided at times great angst and concern...*

Marnie (postconventional shifter): *The changes [in me] occurred during the project phase of the program. I had a small project group to work with (3 people) with unique and challenging personalities. After a short period of working in the group I had to re-evaluate my expectations and my role within the group...I had to dig deep personally to ensure that the project team got through the 12 months and that the result was of a professional standard. I very much enjoyed the challenges of getting the local community to buy into the project and the individuals that I met along the way.*

Olivia (postconventional shifter): *The research project identified how hard it can be to get a job done when everyone is so different and has different objectives and desire things they want out of the program whilst still trying to fulfil all other work/life commitments.*

A poignant example of an interpersonal challenge was articulated by Hamish (a postconventional shifter) who described the need to grapple with, and grow beyond, the psychological conflict created by a clash of values he experienced in relation to other participants:

Hamish (postconventional shifter): *I have found frustration over the journey in participants' unwillingness to accept without prejudice or condition. I have had to be self-aware of the frustrations of my own personal needs not being met as a result, yet find a way to encourage and challenge a more inquisitive, explorative environment.*

As mentioned above, other interpersonal program components identified by a few shifters as important to their development were coaching sessions, peer review/feedback, and learning from guest presenters:

Jody (postconventional shifter): *The feed forward [peer feedback] session delivered at the mid-year retreat had a big impact on me as I had no idea that other people saw me in the light that they expressed during this session...often more learning's for me came through the Q&A time [with presenters] rather than through the presentations. Many consistent messages came through from leaders that really stuck with me. Real world examples were most memorable.*

Leah (postconventional shifter): *The program overall has helped create the conditions [for change] - but specifically the one on one coaching was very useful and effective and the Myers Briggs session and exercises. The feed forward [peer feedback] session was also powerful.*

Personal saliency, emotional engagement and space for reflection

As noted previously, a large proportion of shifters made comments that reflected that the personal saliency of the program and the emotional engagement it had elicited had been important in facilitating the changes they had noticed in themselves:

Jody (postconventional shifter): *I found that simply by attending a [program] session that I would leave feeling more positive, enlightened and had my head space back in the big picture. Often the sessions came right when I needed them!*

Erin (postconventional shifter): *The information learned around mental health, environment and cultural diversity, I think has opened my eyes to more considerations I need to take into account when managing people...I have become more aware of the carbon footprints my workplace contributes and have taken steps to reduce this. I have more confidence to get involved in community projects and how I can positively contribute to these.*

Fiona (postconventional shifter): *There were some key topics that really struck a chord with me over the year - health and well-being, indigenous communities, social inclusion. Being made more aware of these issues at a grass roots level was inspiring and often moving.*

Several shifters mentioned the space for reflection that the program provided was important in catalysing the changes they had noticed in themselves:

Colin (conventional shifter): *The two day format of the program is extremely indulgent in terms of allowing time for people to isolate themselves from the real world. This 'time stop' allows for moments of self-reflection, internal debate and forced contemplation on personal and professional beliefs and traits.*

Edward (postconventional shifter): *I think the program brought with it the means to undertake reflection at a level that you do not often provide yourself with.*

Comparisons with movers and non-shifters

As was the case for question 1, the responses of movers and non-shifters in relation to the impact of the program tended to fit the same major themes as those of the shifters – although in general with a lower percentage of respondents data coded under each (see Table 5.4). There were significant differences ($P < .001$) between the proportion of shifters who mentioned the interpersonal nature of the program (79%) and the proportion of non-shifters (37%) who did so, as well as between the proportion of shifters who mentioned the personal saliency and emotional engagement of the program (64%) and the proportion of non-shifters who did so (17%).

As was the case for question 1, the prevalence of the main themes amongst movers was midway between that of the shifters and the non-shifters. Although there were no statistically significant differences between the movers and either the shifters or the non-shifters on these themes, along with the significant differences between shifters and non-shifters, it does appear to highlight that what represents an accommodatively challenging experience in a program sufficient to catalyse a stage shift in consciousness for some, might move others into a transition phase and may appear, superficially, to have little immediate impact on others. This is likely to be due to differences in stage stability/transition on program entry (which in turn may be influenced by other state, trait, environmental and sociocultural readiness factors).

Comparisons between shifters with preferences for Sensing and Intuition

The prevalence of responses within the major themes in the data relating to the impact of the program from those shifters with a preference for Sensing (n=13) were compared to those with a preference for Intuition (n=15) on the MBTI using Fishers Exact Tests (see Table 5.4).

Although there was a higher prevalence of those with a sensing preference who had mentioned the interpersonal nature of the program, the difference did not reach statistical significance. Nevertheless, the trend should be noted and warrants further investigation with a larger sample size in future research. In the meantime, the results do not offer further understanding of the results found by Vincent et al. (2014) that greater psychosocial challenge was required to catalyse a shift in consciousness for those with a Sensing preference.

Table 5.4: Program impact: Group comparisons

Themes	Shifters (n=28)	Movers (n=13)	Non-Shifters (n=40)	Sensing (n=13)	Intuition (n=15)
Interpersonal nature	79% (22)	54% (7)	37% (15)*	92% (12)	67% (10)
Personally salient & emotionally engaging	64% (18)	46% (6)	17% (7)*	54% (7)	73% (11)
Space for reflection	14% (4)	8% (1)	15% (6)	15% (2)	13% (2)

* $P < .001$ (comparison with shifters)

Question 3 - descriptions of recent significant life events also promoting development

When asked about other important personal and professional influences in the 12 months prior to, or during, the program that may have also created the conditions for the changes that

respondents had noticed in themselves, work changes and challenges featured prominently in the responses of shifters (78%). They also mentioned a variety of supportive factors (22%), as well as relationship breakdowns (11%), relocation (7%), deaths (11%), births (7%) and illness (7%). Only 7% said they had not experienced any other important influences in their lives during the course of the program that may have contributed to the changes they had noticed in themselves.²

Work changes and challenges

Of the shifters who noted work changes and challenges, 62% mentioned that they had received a promotion, started a new job or had been given significant additional responsibilities. Examples included:

Quella (conventional shifter): During the program I received two promotions at work. These things helped shape my personal and professional development.

Karen (conventional shifter): My husband and I started a business...I am involved in the governance, administration and people management side of the business. This has helped me make decisions faster, be better at separating work and home life, think about all the possible impacts of every decision and ensure I create environments where being entrepreneurial is encouraged.

² Participants in the study were also asked about whether they thought the brief introduction to the model of consciousness development provided in the research had any impact on their readiness to develop. Only 16% of shifters and 17% of non-shifters indicated that awareness of the model of development had potentially increased their readiness to develop. Fishers Exact Tests found no significant differences between shifters and non-shifters.

Erin (postconventional shifter): *In the month prior to starting [the program] I moved to the country and changed to a new job. I have been on a very steep learning curve with the new job and have had to really put time in with my family to adjust to this big transition.*

Gina (postconventional shifter): *I have been working on a business transformation project for my company, leading the strategic thinking, setting new plans and strategies for products and marketing. I have attended Board Meetings for the first time in my career and have presented my thoughts and insights and have developed executive relationships as opposed to managerial.*

An additional 24% of shifters said they were unhappy in their work roles:

Ian (conventional shifter): *The year before the program commenced, I was in a job that I did not like and was not a match for my skills. It led to a number of frustrations and put pressures on my relationship.*

Adam (postconventional shifter): *Being asked to take a leadership role in my organisation that I don't believe is right for me has enhanced my understanding of the right leadership roles for me.*

The remainder stated that they had experienced stress in the workplace (14%):

Marnie (postconventional shifter): *Yes, senior role in global multi-national corporate. I experienced a very stressful work environment; very positive experience with work outcome but extremely nasty personal challenge with bullying behaviours from one individual. Also, challenging behaviour from a*

project team member acting dishonestly and creating an environment of distrust within the team.

Supportive factors

Quite a few shifters (22%) mentioned a diversity of factors that they suggested were supportive of their development:

Beatrix (conventional shifter): *Not working for the year because of maternity leave.*

Jake (postconventional shifter): *Yes, I started reading more self-improvement books and would listen to a daily podcast that has life and health/fitness tips. Keeps me on track. I've lost 14kgs in the last 9 months and am really fit.*

Penny (postconventional shifter): *Yes, my role as [president of a professional association] has provided me with many opportunities to develop my confidence and skills.*

Other life challenges

Other life circumstances mentioned by shifters included relationship breakdowns (11%), deaths (11%), births (7%), illness (7%) and relocation (7%):

Jody (postconventional shifter): *I experienced a traumatic relationship breakdown earlier in the program which deeply impacted my entire life, including my perspectives, my values and my ability to trust people.*

Kieran (postconventional shifter): *Death of an uncle at the age of 47 with 3 teenage boys which has left a lasting impact on outlook on life and a refocus on important things for me.*

Beatrix (conventional shifter): *Birth of first child. Death of my father.*

Colin (conventional shifter): *The birth of my child and the beginning of a new professional challenge certainly contributed to my dynamic and thoughtful period of thinking, doing and self-reflection.*

David (postconventional shifter): *My son nearly died...The biggest impact has been the illness of my son....*

Cara (postconventional shifter): *I was approached for a new role which took me out of my comfort zone and included relocation. I accepted.*

Comparisons with movers and non-shifters

The themes drawn from the responses of movers and non-shifters in relation to other important personal and professional influences in the 12 months prior to, or during, the program were again similar to shifters (see Table 5.5). A Fishers Exact Test revealed a statistically significant difference ($P < .02$) between the prevalence of work changes and challenges reported by shifters (78%) and non-shifters (46%). This aligns with research cited earlier which suggested job challenges (including promotions and other changes in work responsibilities, as well as dissatisfaction with work and dissonance in the work environment) may contribute to the transfer of learning from leadership development programs (Musselwhite, 1985). Interestingly, although Musselwhite (1985) found that births and illness had a negative effect on transfer of learning in a leadership development program, these events were mentioned by similar proportions of shifters and non-shifters in the current study, suggesting that they may not always negatively impact consciousness development. Relationship breakdowns were also mentioned by similar proportions of shifters and non-shifters as were various supportive factors.

Comparisons between shifters with a preference for Sensing and Intuition

Statistical comparisons (using Fishers Exact Probability Tests) were also made between the shifters with a preference for MBTI Sensing (n=13) and those with a preference for Intuition (n=15) in relation to other important personal and professional influences in the 12 months prior to, or during, the program (see Table 5.5). The higher prevalence of Sensing shifters reporting factors that were supportive of their development was significant ($P < .04$). No other significant differences were found.

Table 5.5: Life challenges prior to and/or during the programs: Group comparisons

Themes	Shifters (n=27)	Movers (n=13)	Non-Shifters (n=41)	Sensing (n=12)	Intuition (n=15)
Work challenges	78% (21)	61% (8)	46% (19)**	67% (8)	87% (13)
Relocation	7% (2)	-	7% (3)	-	13% (2)
Deaths	11% (3)	-	5% (2)	17% (2)	7% (1)
Relationship breakdown	11% (3)	15% (2)	2% (1)	17% (2)	7% (1)
Births	7% (2)	15% (2)	7% (3)	17% (2)	-
Illness	7% (2)	8% (1)	7% (3)	-	13% (2)
Supportive factors	22% (6)	15% (2)	24% (10)	42% (5)	7% (1)*
Family difficulties	-	8% (1)	12% (5)	-	-
None	7% (2)	8% (1)	17% (7)	8% (1)	7% (1)

** $P < .02$; (comparison with shifters); * $P = .06$ (comparison with Intuition)

Question 4 - the significance of program timing

Most shifters (70%), movers (77%) and non-shifters (79%) thought that the timing of the program in their lives had an impact on their readiness for development (and of those who didn't, the vast majority said this was because they were open to continuously developing). There were diverse reasons given for the importance of the timing, but there were similar themes and prevalence's across all three groups (see Table 5.6). Among shifters, the most prevalent themes were that the program had 'crystallised' their desire to change in some way (22%), having the time to devote to the program (15%) and being open to challenge (15%).

Table 5.6: Program timing: Group comparisons

Themes	Shifters (n=27)	Movers (n=13)	Non-shifters (n=38)
Crystallisation of desire	22% (6)	31% (4)	16% (6)
Crystallisation of discontent	-	-	3% (1)
Age-related/social clock	7% (2)	8% (1)	10% (4)
Time to devote to program	15% (4)	-	5% (2)
Sync with family development	7% (2)	15% (2)	8% (3)
Looking to change/open to new challenge	15% (4)	23% (3)	21% (8)
Synch with job role	7% (2)	8% (1)	21% (8)
Yes – non-specific	15% (4)	-	10% (4)
No	30% (8)	23% (3)	21% (8)

As was the case for Bauer et al. (2005) examples of crystallisation of desire were relatively common amongst our respondents, with a modest percentage of both shifters (22%), movers (31%) and non-shifters (16%) characterising the timing of the program in these terms (i.e. in helping them move towards a desired future). No respondents implied the program had led to a crystallisation of discontent, although a small percentage implied that they were experiencing discontent on entering the program and the latter had been helpful in catalysing a more positive direction. Examples of responses categorised as a crystallisation of desire included the following:

Nadia (postconventional shifter): Yes. The timing could not have been more perfect for me - divorce, change of job, single-parenting. The program has allowed me to channel my energy and to trust the things that I felt I knew about myself.

Jody (postconventional shifter): To a degree I have been forced to change through personal circumstances and the [program] experience has really supported and guided me through that change process (although I feared the opposite would be the case!). It has led to change in more areas than I could have imagined and given me a new lease on life and a much broader perspective. Although I felt forced to change, I was certainly needing it and ready for it.

Modest percentages of shifters, movers and non-shifters mentioned the program timing in relation to synchronicity with their age, having the time to devote to the program, and alignment with the development of their family or their job role. Of those who mentioned their

age (9% overall) most mentioned the 'decade age markers' suggested by Palus (1993) and one shifter also mentioned a mid-life crisis (Van Velsor & Musselwhite, 1986):

Quella (conventional shifter): *I was approaching 30 years of age I think*

/thought I should be really focussed.

Cara (postconventional shifter): *Yes I think mid 40s is a pivotal time. This*

course is much more constructive than a midlife crisis – but no coincidence

that they happen at the same time.

Most respondents felt that the program had come at an appropriate time in their life and there were no significant differences between shifters, movers and non-shifters in relation to any of the timing themes.

Conclusions

In this study we explored the experience of development from the perspectives of those who had recently shifted (or come close to shifting) a stage of consciousness during the course of a community leadership program (CLP). We wanted to explore how some trait, state and environmental factors may mediate readiness for consciousness development – in particular, work and other life challenges experienced immediately prior to or during the course of the program, age-related timing factors and Sensing and Intuitive personality preferences. In addition, we were interested in understanding whether or not the changes these individuals had noticed in themselves aligned with Loevinger's theory of consciousness development, and whether or not their descriptions of the impact of the program aligned with Manners' and Durkin's (2000) framework for the design of interventions to promote consciousness development. Our aim was to use this information to make suggestions regarding the design

of, and selection of participants for, leadership development and other interventions to promote consciousness development, as well as for future research.

Limitations

When interpreting the results of the present study, several limitations warrant consideration. Firstly, the use of a survey rather than in-depth interviews limited the data we had to work with. We chose to use a survey for practical reasons – our questions could be inserted into a regular survey of graduating CLP participants, allowing us to collect data from a much larger number of individuals. In addition, the use of a survey can reduce the risk of bias in the data (Boyce & Neale, 2006). However, responses to our survey questions were often missing or very short, making coding more difficult as we often had to code based on very little information. Undertaking in-depth interviews would have allowed us to build rapport with our participants and allowed us to re-phrase questions, clarify points, ask new questions depending on the answers of the respondent and probe more deeply where we needed to. It is thus likely that we would have had much more detailed and richer information with which to explore our research questions (Boyce & Neale, 2006). Follow-up research using in-depth interviews should be undertaken to test and further clarify our findings.

Furthermore, although our sample size was reasonable for a qualitative study, it was not really large enough to obtain sufficient samples for the subgroups used in the statistical comparisons (particularly the comparisons between shifters with preferences for Sensing and Intuition). Thus, the results of these analyses should be treated as preliminary and repeated with larger samples.

In addition, although precautions were taken to reduce the possible impact of the first author's involvement in the community leadership development field and to support the

trustworthiness of the analyses, the possibility of some bias in coding cannot be eliminated and should be considered in the interpretation of the results.

Summary of findings, implications and recommendations

We found that the most prevalent changes noted by individuals who had shifted a stage of consciousness were increased interpersonal awareness and skill, personal autonomy, self-awareness, capacity for reflection, tolerance for difference and flexibility. We also found that the complexity of their descriptions of the changes reflected the stages they had transitioned to. These findings not only provide support for Loevinger's (1976) theory but also affirm the growing body of research showing positive associations between consciousness development and better leadership performance and organisational outcomes cited in the introduction. As Joiner and Josephs (2007) have noted, the development of such capacities is critical for effective leadership. However, as far as we know, the current research is the first to show that what the theory says develops is actually what individuals experience as developing.

The alignment of our findings in relation to the impact of the program on those who had shifted a stage of consciousness with the conceptual framework for promoting consciousness development articulated by Manners and Durkin (2000) provides further support for the latter. This has clear implications for leadership and other programs designed to promote consciousness development. It is not easy to design programs that offer disequilibrating challenges that are interpersonal in nature, personally salient and emotionally engaging over a time period that is long enough to promote consciousness development (although we don't actually know how long this is – and it is likely to be determined in part by individual readiness factors – Loevinger (1979) and Palus and Drath (1995) have noted that it is unlikely to be short given the theoretical stability of consciousness stages). CLPs are one example, but they are run

over a minimum of 10 months and require participants to come together regularly for substantial amounts of time. In the current economic climate there is pressure to offer shorter leadership programs that minimise time out of the workplace and also to move programs online. Although such programs may enhance capacity within a particular stage of development, this trend is likely to be counterproductive to the possibility of promoting consciousness stage transition – and thus the capacity to take a broader and more adaptive perspective on organisational and societal challenges. It is currently difficult to conceive of how alignment with the Manners and Durkin (2000) framework could be achieved in an online program, although as technology improves this may prove feasible.

The complexity of consciousness development and the need to consider readiness factors when planning developmental interventions was highlighted by our finding that even though the majority of non-shifters had noticed changes in themselves throughout the course of the program, they were significantly less likely than those who had shifted a stage of consciousness to attribute these to the interpersonal nature of the program, or its personal saliency and emotional engagement (i.e. to the non-structural characteristics specified by Manners and Durkin, 2000). Furthermore, the prevalence of responses within the latter themes of those who had moved substantially towards a postconventional stage shift (movers) sat between those of the shifter and non-shifters. This suggests that what is perceived as a disequilibrating, interpersonal, personally salient and emotionally engaging program experience that catalyses (or helps to catalyse) a consciousness stage shift varies depending on stage stability and other readiness factors. Thus, as Manners et al. (2004) and Vincent et al. (2014) demonstrated, program design in accordance with Manners' and Durkin's (2000) framework may be

necessary, but not sufficient, to catalyse a shift in consciousness development. Individual readiness factors also need to be taken into account.

One of the important differences we found between shifters and non-shifters was the prevalence of work challenges and changes in the 12 months prior to or during the course of the program. Shifters were much more likely to cite such changes and challenges when asked about other influences and experiences in their lives that may have also created readiness for development. It is feasible that the experience of such changes and challenges had primed individuals for development by moving them into the 'anomaly' or 'possibility' phases of stage transition (Dunsky, 2002). It is also possible that having some tangible issues to work through within the program, and to which the lessons from the program could be directly applied, increased the perceived importance of the interpersonal nature of the program, as well as its personal saliency and emotional engagement (hence the results outlined above) – and thus, the possibility of a stage transition. Of course, these two possibilities could operate independently or interdependently and there are likely to be other readiness factors at play as well. However, this finding (along with the observation that other important life challenges such as births, deaths and illness were found in similar proportions in shifters and non-shifters, indicating that these are not particular barriers to development) aligns with the suggestion by Day et al. (2009) that there may be interaction effects from pairing or bundling experiences (life and developmental) together, as well as that of Palus and Drath (1995) that periods of challenge or dissatisfaction might indicate an opening for developmental interventions. An important, although preliminary, implication is that when selecting people for such programs, consideration should be given to prioritising those who are experiencing significant work or other life changes and challenges, rather than sidelining them until such issues are resolved –

even though this may seem counterintuitive. That said, caution is warranted here, as Pals and John (1998) noted various lines of research that suggested the capacity to cope with such challenges in constructive and problem-focussed ways may be a function of stage of consciousness development – with higher stage individuals taking a proactive stance and those at lower stages taking a more defensive and hostile stance. Other psychological factors would need to be considered as well, since the additional stress of a developmental program might be counterproductive for someone in a very fragile state (Palus & Drath, 1995).

We have previously found that a preference for Intuition on the MBTI (when compared to a preference for Sensing) was associated with significantly higher consciousness development on entry into CLPs and with greater consciousness development during the programs (Vincent et al., 2013) and that more extensive psychosocial challenges were required to promote consciousness development in those with a preference for Sensing (Vincent et al., 2014). However, although we found a trend towards those with a Sensing preference being more likely to cite the interpersonal nature of the program as being important for their development, this difference was not significant. Similarly, those with a Sensing preference were no more likely to cite work and other life changes and challenges during the program or in the preceding 12 months as being important to their development than those with a preference for Intuition. They were, however, more likely to report factors that were supportive of their development. Although the latter is interesting, the diverse nature of the supportive factors identified does not allow us to make any further inferences about this finding (and given the very small numbers in the sample, the statistical significance should only be treated as tentative). It is something that could usefully be considered in future research, because if supportive factors are found to be more important for the consciousness

development of those with a preference for Sensing, then this will need to be an important consideration in program design and selection for participation. Furthermore, as Cohn (1998) argued, future research should continue to explore other aspects of personality that may mediate the response to potentially disequilibrating experiences (whether these are within specially designed programs or in broader life). McCauley et al. (2006) noted that the impact of such variables on the effectiveness of leaders has been studied extensively, however very few studies of consciousness development have done so to date.

Our research did not offer any evidence to support the idea that crystallisations of discontent or desire might feature more prominently in the narratives of those who had recently shifted a stage of consciousness, or that age-related triggers might play a role in such a transition. However, it should be noted that we found the survey format particularly inadequate for exploring such elaborate concepts and so we would encourage future researchers interested in doing so, to utilise in-depth interviews or other more appropriate qualitative tools.

In conclusion, this study reporting the subjective experience of recent shifts in consciousness specifically within the context of CLPs found support for theoretical predictions concerning the types of changes shifters noticed in themselves, consistent with the small but growing body of research showing positive associations between consciousness development and better leadership performance and organisational outcomes. Although we also found support for the conceptual framework for promoting consciousness development articulated by Manners and Durkin (2000), our other results underlined the complex nature of such development and the importance of considering individual trait, state and environmental readiness factors if we are to develop a more sophisticated and tailored approach to

promoting it. Our conclusions provide much fodder for future in-depth qualitative and quantitative research.

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Chapter 6: Discussion

Introduction

The three studies described in this dissertation were designed to investigate the following research questions:

1. Are particular personality preferences and combinations thereof (as measured by the Myers-Briggs Type Indicator or MBTI) associated with higher consciousness levels, and might particular personality preferences act as inhibiting or facilitating factors in consciousness development?
2. Do Australian community leadership programs promote consciousness development - particularly to post-conventional levels?
3. What is the perspective of those who have recently shifted a stage of consciousness in relation to how they have changed and the nature and timing of experiences (within the program and/or in their broader lives) that they believe may have triggered such changes?

The studies were underpinned by the following assumptions:

1. The psychological capacities associated with increasing consciousness development serve as a fundamental master platform for the development of leadership capacity and;
2. Higher levels of consciousness development are associated with greater leadership capacity and;
3. The capacities that evolve at post-conventional levels of consciousness development will be required for tackling the complexity of our 21st Century organisational, community and global challenges.

It is clear from the literature review in Chapter 2, that there is reasonable and growing empirical support for the first two of the above assumptions. It must be conceded however, that although many constructive developmental theorists have argued that resolution of the adaptive challenges now faced by organisations and communities and globally, requires leadership from people who have reached post-conventional stages of adult psychological development, and this makes sense from a theoretical point of view, the third assumption is based on only a limited amount of empirical evidence at the present time. This is because, as McCauley et al. (2006) noted, people at the post-conventional stages are rare in the population and, as a result, very few studies have included them.

In the following sections of this chapter, the key findings in relation to the research questions are summarised and the implications for practice in the adult development/leadership development fields, methodological strengths and weaknesses of the program of research and suggestions for future research are discussed.

Summary and discussion of the research findings

Findings in relation to research question 1

The first study in this dissertation explored whether personality preferences and combinations thereof (as measured by the MBTI) are associated with higher consciousness levels (as measured by the WUSCT) and whether particular personality preferences might act as inhibiting or facilitating factors in consciousness development. Manners and Durkin (2000) argued that exposure to life experiences that present challenges to existing ways of meaning-making is influenced by dispositional personality traits that interact in complex ways to influence the likelihood of such exposure, whether such events are perceived as

disequilibrating in relation to existing consciousness structures and, if so, whether this is resolved by assimilation or accommodation.

Although there is a considerable body of research that has examined the correlations between consciousness development and specific dimensions of personality in adulthood, one of the important criticisms of this body of work is that it is difficult to determine which individual differences are a consequence of consciousness development (and thus associated with particular stages) and which foster it (Westenberg & Block, 1993). This study set out to overcome this criticism by utilising a quasi-experimental research design, including an intervention that has the potential to promote consciousness development (Community Leadership Programs – CLPs) and examining whether personality preferences were related to the development that occurred.

The outcomes of the research reinforced the finding from one previous study (Bushe & Gibbs, 1990) that Intuition, as measured by the MBTI, is associated with higher ego development. However, not only was a preference for MBTI Intuition associated with significantly higher consciousness development on entry into the leadership programs included in the study (when compared to the opposite preference of Sensing), it was also associated with greater consciousness development during the programs when compared to those with a Sensing preference. The latter does not appear to have ever been demonstrated before. It supports the proposal in Manners' and Durkin's (2000) framework, that personality factors may foster or inhibit consciousness development.

Findings in relation to research question 2

The second study presented in this dissertation aimed to test whether Australian community leadership programs (CLPs) promoted consciousness development - particularly to

post-conventional levels. In addition to their proposal in relation to the impact of personality traits on consciousness development, Manners and Durkin (2000) argued that interventions to promote such development must be designed to offer challenge that is one or two stages higher than the level of consciousness of the participants. Furthermore, they proposed that the nature of the challenges should be interpersonal, emotionally engaging and personally salient. These specifications have only been tested (and supported) previously in a single small intervention study (Manners et al., 2004). However, the latter was designed to promote consciousness development only within the conventional tier and did not include consideration of personality factors or preferences.

Although, at the time of data collection for the current research, most Australian CLPs did not incorporate constructive developmental theory as an organising framework or deliberately set out to promote consciousness development, their design actually matches Manners' and Durkin's specifications (with some programs, which were labelled 'enhanced' including additional psychosocial challenges). CLPs therefore presented an opportunity within the current program of research, for a second quasi-experiment to test whether programs designed in this way could promote consciousness development - particularly to post-conventional levels.

The results of the second study provided support for Manners' and Durkin's (2000) framework that interventions to promote consciousness development should be designed to be interpersonal in nature, emotionally engaging, personally salient and structurally disequilibrating. Standard and enhanced CLPs designed in this way, were equally successful in facilitating development within the conventional tier (from Expert to Achiever). However, the enhanced CLPs were significantly more successful in promoting consciousness development to

the first post-conventional stage (and beyond) than standard CLPs and controls, indicating that in order to facilitate post-conventional consciousness development, program components that offer psychosocial challenges that are greater than the challenges provided in the standard CLP design are required. Further analysis of the those with MBTI Sensing and Intuition preferences complicated this picture however, as it was found that although participants with a preference for MBTI Intuition were significantly more likely to develop in consciousness terms during the course of the study than those with a preference for Sensing, there were no significant differences between enhanced and standard CLPs and the control group in terms of the promotion of Intuitives from the last conventional stage to the first postconventional stage of consciousness. A significant difference was found however, between enhanced and standard CLPs in their capacity to promote those with a preference for Sensing who entered the program at the last conventional stage to the first post-conventional stage. It seems then, that the additional psychosocial challenges included in enhanced CLPs were only required to promote post-conventional development in those with a Sensing preference. This result also provides further support for Manners' and Durkin's (2000) argument (tested in the first study) that what counts as a structurally disequilibrating challenge and/or how that challenge is perceived and responded to, may be influenced by personality traits.

The finding that Sensing types entering the program at Achiever level were more likely to develop to the first post-conventional stage in enhanced CLPs, but that those Sensing types who entered at Expert were no more likely to develop to Achiever level in enhanced CLPs than in standard CLPs or the control programs, indicates support for the argument of Palus and Drath (1995) that what counts as a disequilibrating trigger for development is also mediated by existing stage of development. It is possible that the additional psychosocial components in

the enhanced CLPs represented challenges that were too much of a stretch for those Sensors at the Expert stage to accommodate. As noted in Chapter 2, challenges that are too far from an individual's range of understanding may seem absurd, overwhelming and/or threatening and may elicit hostility or indignation, neither of which is likely to be conducive to consciousness development (Day et al., 2009; Garvey-Berger, 2012; Palus & Drath, 1995). However, it seems such components may have represented the appropriate level of challenge to trigger development in those with a Sensing preference at the Achiever stage.

Findings in relation to research question 3

The third study included in this dissertation aimed to enhance an understanding of how some trait, state and environmental factors may influence readiness for consciousness development and stage transition in order to inform the design of interventions to promote such development, as well as inform participant selection for such programs. It explored the perspectives of those who had recently shifted a stage of consciousness during the course of participating in an enhanced CLP (although the participants were naïve to their consciousness shift status at the time they completed the survey). Participants were asked about the changes they had noticed in themselves, as well as the nature and timing of experiences (within the program and/or in their broader lives) that they believed may have triggered such changes. The responses of 'shifters' were compared to those from participants who had not shifted a stage of consciousness during the course of the study, as well as those who had come close to doing so ('movers'). In addition, responses from shifters with MBTI preferences for Sensing and Intuition were compared, with the aim of shedding further light on the results found in the two previous studies. Of particular interest from a theoretical perspective, was whether the participants' descriptions of what they experienced, and what made a difference to their

development, aligned with Loevinger's (1976) constructive developmental theory and with Manners' and Durkin's (2000) framework for interventions to promote consciousness development.

Research on how people experience their own consciousness development and what they believe has been important in promoting this growth, is extremely limited. More specifically, there does not appear to be any other research that has explored perspectives on growth in the period following a recent shift in consciousness – and so this study is unique in this regard.

The results of the study demonstrated an alignment with Loevinger's (Loevinger & Blasi, 1976; Loevinger, 1987) theory in terms of the changes that participants who had shifted a stage of consciousness (Shifters) had noticed in themselves (i.e. increased interpersonal awareness and skill, personal autonomy, self-awareness, capacity for reflection, tolerance for difference and flexibility). These findings also affirm the growing body of research showing positive associations between consciousness development and better leadership performance and organisational outcomes cited in Chapter 2, as the development of these capacities is critical to effective leadership.

The results also added further support to Manners' and Durkin's (2000) proposal that interventions to promote consciousness development should offer challenges that are interpersonal in nature, emotionally engaging and personally salient, as these were the qualities of the programs that participants identified as being important in promoting the changes they had noticed in themselves. However, it is also clear that program design in accordance with these specifications may be necessary, but not sufficient, to catalyse a shift in consciousness development and thus, there is a need to consider readiness factors when planning developmental interventions. The latter was highlighted by the finding that even

though the majority of non-shifters had noticed changes in themselves throughout the course of the program, they were significantly less likely to attribute the changes to the interpersonal, emotionally engaging and personally salient nature of the program, indicating that they did not perceive the program in the same way as those who had shifted.

One possible explanation for the above result may be linked to the finding that when asked about influences and experiences in their lives outside of the program that may have created readiness for development, significantly more shifters mentioned work challenges and changes in the 12 months prior to or during the course of the program. The majority of these referred to starting a new job, receiving a promotion or being given significant additional responsibilities. It is possible that having some tangible issues to which the lessons from the program could be directly applied increased the perception of its personal saliency and elicited greater emotional engagement – and thus, the possibility of a stage transition in those who were experiencing work and other life challenges.

The finding that those who had moved substantially towards a postconventional stage shift (movers) had responses in-between those of the shifters and non-shifters in terms of the prevalence of attributions of the changes they had noticed in themselves to aspects of the program they found interpersonally challenging, emotionally engaging and personally salient, as well as in terms of the prevalence of work challenges and changes mentioned, provides further support for the above explanation. In addition, this supports the arguments by McAuliffe (2006) and Kegan (1982; 1994) that consciousness development does not appear to occur in whole leaps - there is a gradual movement towards a stage shift, rather than a sudden switch.

Along with the observation that other important life challenges such as births, deaths and illness were found in similar proportions in shifters and non-shifters, (indicating that these are not particular barriers to development) these results align with the suggestion by Day et al. (2009) that there may be interaction effects from pairing or bundling experiences (life and developmental) together, as well as that of Palus and Drath (1995) that periods of challenge or dissatisfaction might indicate an opening for developmental interventions.

Unfortunately, the results from the third study did not help to explain further the finding in the second study that those with a preference for MBTI Sensing were significantly more likely to develop to the first post-conventional stage of consciousness if they participated in the CLPs that included the enhanced psychosocial challenges. It was thought that comparing Sensing and Intuitive shifters in study 3 (all of whom had participated in an enhanced CLP) might show that those with a Sensing preference were more likely to identify the enhanced psychosocial components of the programs as being important in facilitating the changes they had noticed in themselves. However, although there was a trend towards those with a Sensing preference being more likely to cite the interpersonal nature of the program as being important for their development, this difference was not significant. Sensing types were, however, more likely to report factors that were supportive of their development, although no inferences could be drawn about the latter due to the diverse nature of the factors identified.

Finally, study 3 did not offer any evidence to support the proposal by Manners and Durkin (2000) and Manners et al. (2004) that crystallisations of discontent or desire might be a feature of the process of consciousness stage transition, or the proposal by Palus and Drath (1995) that age-related triggers might play a role in such a transition. However, further investigation of

these factors should be undertaken, as the survey format used for data collection in study 3 was found to be particularly inadequate for investigating such elaborate concepts.

Strengths and limitations of the research

In their critical review of the literature relating constructive developmental theories to leadership, McCauley et al. (2006) noted not only the lack of inclusion of participants at post-conventional stages, but also that many studies to date suffered from small sample sizes, the inclusion of a restricted range of stages of consciousness development and the lack of participants from outside of the United States. In addition to the limitations of the samples, McCauley et al. pointed out that studies to date had been almost exclusively cross-sectional in their design, as well as piecemeal – with few researchers undertaking programs of research that include studies that build and refine understanding. Furthermore, they expressed their disappointment that there has been little research that has examined the dynamics of developmental movement and thus, they called for more research that examines how training, development or coaching programs impact on consciousness development. Similar criticisms were made by Manners and Durkin (2000) about the studies of intervention programs to promote consciousness development that they reviewed.

The program of research described in this dissertation has addressed all of these criticisms. Not only was the research conducted in three cumulative stages with non-US (Australian) participants, two of the studies (study 1 and 2) were designed as quasi-experiments and involved large sample sizes, as well as a reasonable range of developmental stages that included those in the post-conventional tier (ranging from Diplomat to Strategist). In addition, all three studies were focussed on the dynamics of development, with the aim of further testing and clarifying Manners' and Durkin's (2000) conceptual framework for the processes

involved, particularly with regard to development to the first post-conventional stage. Furthermore, the second and third studies were specifically focussed on how a leadership development program impacted on the growth in consciousness. As such, this program of research makes an important and unique contribution to the literature in both the adult development and leadership fields.

Some limitations remain however. Firstly, the restriction of the measurement of personality to the MBTI – although deliberate in this case (to ensure that research participation was relatively simple and usefully aligned with the typical content of the leadership programs) limits the strength of the conclusions. If the leaders of the programs had been amenable to additional measures, then it would have been useful to have also included a measure related to the FFM such as the NEO PI-R.

Furthermore, although the sample sizes in the first two studies were large and relatively similar to other published managerial samples in terms of the spread of consciousness stages, the results are not necessarily generalisable to the adult population as a whole. For example, the limited representation of consciousness levels below Expert and above Individualist means that it is not possible to draw any conclusions about whether the findings are generalisable to those at earlier or later stages of development. Furthermore, in study 1 the sample size was not large enough to obtain sufficient samples of all of the 16 MBTI whole types and so the results of these analyses should be treated as preliminary and repeated with larger samples. A further sample limitation in study 2 was the small size of the control group. Almost half (48.6%) the participants in the control group dropped out of the study between the first and second data collection points, whereas attrition was minimal (6.2%) from the CLPs. Nevertheless, the statistical techniques utilised in the analyses for this study were robust for uneven group sizes

(Pallant, 2007). In study 3, the sample size (although reasonable for a qualitative study) was not really large enough to obtain sufficient samples for the subgroups used in the statistical comparisons (particularly the comparisons between shifters with preferences for Sensing and Intuition) so again, the results of these analyses should be treated as preliminary and repeated with larger samples.

Another limitation of study 2 was the lack of participant follow-up to ascertain whether consciousness development was maintained, or to consider whether consciousness development may have been potentiated in the non-shifters. Such potentiation would be an important outcome in itself, as a stage shift need not be seen as the ultimate goal in the design of programs to promote growth in consciousness. As Palus and Drath (1995) noted, "Such programs must be seen in the context of the overall role they play in a stream of disequilibriations that will be different for each person." (p. 19). However, given the size of the sample and its geographic dispersion around Australia, as well as the fact that the research was entirely self-funded, a follow-up study was not feasible.

Perhaps the most important limitation of study 2 is the grouping together of the diverse additional psychosocial development components incorporated in enhanced CLP programs. This makes it uncertain whether some of the components may have been more effective in facilitating consciousness development than others. Also, programs were placed in the enhanced CLP group if they included just one of the specified additional psychosocial components – whereas some programs included several. Unfortunately, as explained in Chapter 4, it was not possible to compare individual programs to ascertain whether any particular types of psychosocial enhancements (or combinations of these) were more effective than others due to the risk of identifying the programs (and thus breaching ethical standards

for the research). Nevertheless, the small size of the samples at the program level – particularly when comparing participants at different levels of consciousness development within these programs - would have rendered any such analyses unreliable.

Finally, the differences in recruitment of participants into the CLPs and the control programs could be considered a possible limitation of study 2. However, given that no differences were found in the analyses between the standard CLP and control groups it seems unlikely that differential recruiting procedures introduced a bias. Similar recruiting criteria and procedures are utilised across all CLPs and so whatever bias they might have introduced should be applicable to both CLP groups – not just the enhanced group. It was noted however, that it is possible that programs with enhanced psychosocial challenges are more attractive to certain people - perhaps those with particular ‘readiness for development’ factors (Palus & Drath, 1995). A greater proportion of Intuitives was found in the enhanced CLP group and it is possible that there may be other self-selection biases that may not have been accounted for that may have influenced the outcomes of this research.

In study 3, the main limitation was the use of a survey rather than in-depth interviews. A survey was chosen for practical reasons (the questions could be inserted into a regular survey of graduating CLP participants, allowing the collection of data from a much larger number of individuals as well as the reduction of the risk of bias) but it limited the data available to work with because responses to survey questions were often missing or very short, making coding more difficult. In-depth interviews would likely have provided much more detailed and richer information with which to explore the research questions, given that rapport could have been built with participants, questions re-phrased and points of clarification made (Boyce & Neale, 2006). Follow-up research using in-depth interviews should thus be undertaken to test and

further clarify the findings of this study. In addition, although precautions were taken to reduce the possible impact of this author's involvement in the community leadership development field and to support the trustworthiness of the analyses, the possibility of some bias in coding cannot be eliminated and should be considered in the interpretation of the results.

Implications of the research

The studies in this dissertation were focussed on developmental movement, with the relationship between increasing consciousness development and greater leadership capacity forming an underlying assumption. There is nevertheless a great deal more research required in this latter area (particularly given the shortcomings identified by McCauley et al. (2006)) and this could obviously have important implications for the design of programs to promote leadership and consciousness development. The following sections however, will consider the more direct implications of the current studies for practice and future research in terms of program design, participant assessment and practitioner development.

Implications for program design and associated research

The findings from this program of research clearly have some important implications for practitioners in the adult development and leadership development fields. As noted previously, there are increasing calls for, and interest in, the design of interventions to promote adult consciousness development in business schools and in the leadership/executive development arena. Such programs are being encouraged to shift (or at the very least expand) their focus from the development of knowledge, skills and competencies (horizontal development) to facilitating transformations in the complexity of meaning-making (vertical development) so that leaders are able to take a broader and more mature perspective on challenges.

Helsing and Howell (2013) cautioned that it is unrealistic for organisations to seek to develop post-conventional leaders as a primary strategy for resolving performance issues in young and inexperienced Achiever-level employees. This may be true, and an assessment of readiness for development is obviously an important consideration in leader development (and will be commented on further in the next section). Moreover, development obviously needs to be nurtured along the whole spectrum of levels of consciousness. Nevertheless, if the aim is to develop a groundswell of individuals to effectively tackle our 21st Century organisational, community and global adaptive challenges then promoting post-conventional development needs to be seen as an important goal for those who are ready for such development. As has been mentioned several times throughout this dissertation, post-conventional growth is not part of normal development so there are few social supports for it (McCauley et al., 2006) and therefore, such individuals might not otherwise progress without the catalyst of an appropriately designed program or other form of intervention.

One of the clearest implications from the findings of the research in this dissertation is that designers of leadership programs (and other interventions) that aim to promote consciousness development should be guided by the conceptual framework formulated by Manners and Durkin (2000). Such programs need to be tailored to be disequilibrating for participants' current stage of meaning-making (i.e. targeted to be a stage or two above this level) and they need to offer challenges that are personally salient for participants, interpersonal in nature and emotionally engaging. However, although all community leadership programs could be described as offering such challenges, in their standard format (i.e. bringing participants from very diverse backgrounds together and involving them in challenging and provocative experiential community issues-based sessions) these were not disequilibrating enough to

promote consciousness development to the first post-conventional stage in those with a Sensing preference.

Since those with a Sensing preference are in the majority world-wide, particular consideration therefore needs to be given to their development. The addition of enhanced psychosocial components to the standard design is therefore recommended for all community leadership programs,³ and other adult development and leadership development practitioners are urged to consider these design implications in the development of their programs. Specifically, programs need to provide a holding environment in which Sensing types can, perhaps over a longer time span than is required for Intuitive types, be immersed in entirely new situations that require the development of tolerance for ambiguity and lack of routine, offer exposure to diverse perspectives and support deep self-reflection, learning from experience, experimentation and risk-taking. It may also be the case that greater-than-usual exposure to the alternative perspectives and values of people with a preference for Intuition can provide additional challenges that assist in shifting the habits of mind that may be associated with a Sensing preference.

Program challenges also need to be tailored to the particular level of consciousness development of the individuals within the program. Obviously, if they are structured at too low a level they will not offer much disequilibrium potential. Similarly, challenges that are structured too far above an individual's range of understanding may not impact either (for example, the additional psychosocial challenges in the enhanced CLPs in this study did not

³ It is acknowledged that this recommendation may present a challenge to the smaller, regional CLPs in Australia, as the inclusion of such components will generally require specialist facilitators, which may be costly and that may not be readily accessible outside of metropolitan regions. However, some investment in the development of program leaders to design and deliver such components may be feasible, and it may also be possible to collaborate to share specialist resources across regional programs to create efficiencies.

impact those with a Sensing preference at the Expert level – however, those at Achiever appeared to have been impacted by them). Structuring challenges at too high a level may also run the risk of eliciting hostility or indignation rather than promoting development (Day et al., 2009; Garvey-Berger, 2012; Palus & Drath, 1995). Furthermore, the challenges should be balanced with appropriate support and follow-up within the program. As Palus and Drath (1995) noted, there is a deep responsibility on the part of people who run such programs to appreciate the necessary discomfort that is created in the process of consciousness development, and to support individuals through this compassionately, helping them to integrate their new awareness back into their lives outside of the program, and in identifying their own ongoing support and developmental resources.

It is not easy to design leadership development (and other) programs that offer experiential disequilibrating challenges that are interpersonal in nature, personally salient and emotionally engaging over a time period that is long enough to promote consciousness development. CLPs are an example, but they require participants to come together regularly for substantial amounts of time over a minimum of 10 months. As noted earlier however, consciousness stage transition need not be the end goal of a developmental program. Palus and Drath (1995) suggested that leadership development is best considered over a span of years, and although short-term results in terms of consciousness stage shifts may be desirable, the absence of a stage shift does not necessarily mean the absence of development. Individuals at different points in the stage transition process will have different experiences of, and outcomes from, the program.

In the current economic climate there is pressure to offer shorter leadership programs that minimise time out of the workplace and also to move programs online. Although it is currently

difficult to conceive of how alignment with the Manners and Durkin (2000) framework could be achieved in an online program (although as technology improves this may prove feasible), short-term programs designed to offer challenges that are targeted to be a stage or two above the level of consciousness of the participants, that are interpersonal in nature, emotionally engaging and personally salient, may potentiate development that is realised at a later stage – particularly if such programs offer some form of long-term support and follow-up (as recommended by Palus and Drath (1995)). Recent suggestions have also been made for promoting vertical development within the workplace environment through feedback, participation and delegation that is tailored to the limitations of each developmental stage in leader-follower dyads (Valcea et al., 2011), through developmental mentoring networks (Ghosh, Haynes & Kram, 2013) and through the cultivation of a developmental organisational culture (Drath, Palus & McGuire, 2010).

Future research could design tailored interventions to test the efficacy of particular psychosocial challenges and other program design factors (for example, including length of the program, the importance (or otherwise) of the diversity of participants included, and online delivery of components) in promoting consciousness development, rather than utilising pre-existing programs as was done in the current research. As Bartone et al. (2007) noted, research is also needed to establish whether, as suggested by some researchers, there are generalised practices (such as meditation) which may foster or speed growth throughout the developmental process, as well as to clarify the specific factors that influence development at each consciousness level. Consideration should also be given to whether such practices and factors are different for those with particular personality traits or preferences (such as Sensing and Intuition). Furthermore, since it is possible for consciousness development to regress

(Manners & Durkin, 2001; Manners, Durkin and Nesdale, 2004) then future research should include post-program follow-up of participants that considers whether particular interventions are more able to facilitate a sustainable consciousness stage transition and why.

Implications for participant assessment and associated research

An important implication of the results from this research is that when selecting people for development programs, those who are experiencing significant work or other life changes and challenges should not be sidelined until such issues are resolved. Participants who shifted a stage of consciousness in study 3 cited significantly more life challenges during the course of the program and in the 12 months prior (particularly associated with major changes at work) than others. As Palus and Drath (1995) noted, periods of challenge or dissatisfaction might indicate an opening for developmental interventions. Such challenges may serve as catalysts for consciousness development such that, when paired with the additional challenge and support offered in a program environment, they can help to potentiate the stage transition process or realise it. Alternatively (or in addition), having some tangible issues to which the lessons from the program can be directly applied may help to make the program experience more personally salient and emotionally engaging for participants - magnifying the impact of the program experience and potentially helping to catalyse the consciousness stage transition process.

As was pointed out in the discussion of study 3 (Chapter 5), caution is nevertheless warranted when considering the placement of people who are already experiencing stress and challenge in a program in which this will be magnified. As Pals and John (1998) noted, there are various lines of research that suggest the capacity to cope with such challenges in constructive and problem-focussed ways may be a function of stage of consciousness development – with

higher stage individuals taking a proactive stance and those at lower stages taking a more defensive and hostile stance. Since all but one of the participants in study 3 were at the Expert stage and above (with the majority being at the Achiever stage) it is likely that most had developed at least some capacity to handle such challenges proactively (and many described doing so). However, when considering individuals at earlier stages of development who are experiencing such life challenges, as well as those who appear to be in a particularly fragile psychological state (and even those who appear to have just entered a new stage of consciousness and therefore need the chance to consolidate within the new stage) the additional challenge and stress of a developmental program might be counterproductive. As Palus and Drath (1995) wisely observed “Not everybody is ready for further disequilibrium in the name of leadership development. Many people are already burdened with disequilibrium on many fronts. Careful thought needs to be given to readiness: Who is ready for what kind of work?” (p. 25)

As Bartone et al. (2007) and McCauley et al. (2006) have argued, future research could usefully delve more deeply into aspects of personality that may influence the response to potentially disequilibrating experiences (whether these be within specially designed programs or in broader life). McCauley et al. (2006) noted that the impact of such variables on the effectiveness of leaders has been studied extensively, however very few studies of consciousness development have done so to date. Such research could be part of a broader consideration of readiness factors for development (including further exploration of the finding of the female advantage found in the first study in this dissertation). This area was only examined in a preliminary way in study 3 and the survey tool was found particularly inadequate for investigating age-related factors and the process of crystallisation of

discontent/desire. This is a complex arena in which trait, state, environmental and sociocultural factors are intertwined, however their consideration is important if the work within developmental programs is to be matched more effectively to the readiness of the participants. Furthermore, it would be useful to follow up the preliminary finding from study 3 which suggested that supportive factors outside of the program may be particularly important for the consciousness development of those with a preference for Sensing. If this is confirmed, then it will need to be an important consideration in program design and selection for participation.

Another interesting area for future research might be to consider how the form or complexity of the expression of Sensing and Intuition preferences (along with other MBTI preferences) changes with increasing consciousness development. Kegan (1994) noted that some of the stylistic descriptions provided for the MBTI may actually be confounded by level of consciousness. They are certainly likely to be confounded by conventional stages of development, given that there are few people at post-conventional levels on which to base such descriptions. Bennet (2010) combined type theory with constructive developmental theory to illustrate how each type might be expressed in a more complex way at each increasing level of consciousness development. The model is based on the extensive coaching experience of the author and has strong face validity. It has not yet been tested empirically however.

Implications for leadership development practitioners and associated research

One of the very clear implications of the literature and research in this dissertation is that leadership development program professionals need to understand constructive developmental theory and its implications for adult development. They also need to either

develop the capacity to effectively facilitate the vertical processes necessary to promote consciousness development, or employ appropriately trained and experienced consultants to assist them. Although constructive developmental theories have their roots in psychology, and early publications by Loevinger (1976) and Kegan (1982) may have seemed impenetrable to those without such a background, Joiner and Josephs (2007), Rooke and Torbert (2005) and Torbert et al. (2004), have translated the concepts into a form that is more accessible for non-psychologists. Furthermore, training programs for leadership development professionals and executive coaches that are grounded in constructive development theory are now becoming more prevalent.

Future research could consider whether the level of consciousness of program professionals and executive coaches places a ceiling on the level of such development they are able to promote in their participants or clients. It makes sense that this would have some impact, particularly in a one-on-one executive coaching relationship, however in a group program it is possible that this impact would be less salient because participants' development is also influenced by others in the group. An attempt was made to explore this as part of the current research program, however, as mentioned in Chapter 1, fewer than half of the program leaders were prepared to be tested and thus there were not enough data with which to conduct any meaningful analyses.

Conclusions

In order to reach a tipping point for a shift in our global capacity to tackle our adaptive challenges, numbers are critical and many constructive developmental theorists have argued that this will require leadership from people who have reached post-conventional stages of adult psychological development. The research program presented in this dissertation makes

an important and unique contribution to the literature in both the adult development and leadership fields. It aimed to help address gaps in the literature on adult consciousness development – particularly the limited understanding of factors influencing consciousness development to post-conventional levels – whilst also addressing methodological and other criticisms of the existing body of research in this area. It was undertaken in three stages, with large samples and utilising a mixed methods approach (two quasi-experimental studies and one qualitative study).

Together, the studies detailed in this dissertation have provided support for Manners' and Durkin's (2000) framework for the processes involved in adult consciousness development – including to the first post-conventional level, as well as for many of the considerations in Palus' and Drath's (1995) model for promoting such development in a leadership program. In particular, they have underscored the importance of considering personality preferences and other trait, state and environmental readiness factors in relation to the developmental process. They have also demonstrated that Australian community leadership programs (CLPs) are able to facilitate the development of individuals to the first post-conventional stage of consciousness (and beyond). As such, CLPs offer a potential practice model for the development of leadership and other programs to support the transformation from conventional to post-conventional consciousness. With over 6000 graduates of CLPs in Australia, and their continued expansion into other regions of the country and throughout the Asia Pacific region, they (and other similar programs) have the potential to do as Donovan (1997) suggested, and create a 'snowball' effect of higher level thinking that rolls throughout communities, organisations and institutions, and eventually lifts consciousness capacity more generally.

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Appendix A: Survey questions (study 3)

1. Have you noticed any differences in yourself and the way you operate (both personally and professionally) since the program began? If so, how would you describe these differences? Please provide details.

2. Do you attribute the changes you have noticed in yourself to aspects/components of the program? If so, can you describe these and detail the impact that they had on you and why you think they had this impact (can include both challenging and supporting influences/people/components)? [If you can't attribute changes to any particular aspects of the program but feel that the program overall has helped to create the conditions for changes in you, please explain in detail how it has done this].

3. Were there other important influences or events in your life (both personal and professional) that you experienced in the year before the program or during the program that may have also created conditions for change in you (can include both challenging and supporting influences/people/life events and/or behaviours or attitudes that you noticed in yourself that were not working for you anymore etc)? If so, can you describe these and what you noticed about their impact on you?

4. Do you think that the timing of the program in your life right now had an impact on your 'readiness to change'? If so, explain.

5. What did you think of the model of consciousness development that was introduced to you in the program as part of this research? Do you think this had an impact on your readiness to change? If so, how? Did you undertake any additional reading/research on this model? If so, please describe. [please note that it is fine to say that you can't remember this if this is the case!].

Appendix B: Information sheet for participants



INFORMATION SHEET FOR RESEARCH PARTICIPANTS

FACTORS AND PROCESSES INVOLVED IN ADULT CONSCIOUSNESS DEVELOPMENT

Please read and consider the following information before deciding whether to participate in this research.

PURPOSE OF THE STUDY

The focus and aim of this research is to better understand some of the cognitive and personality factors associated with the development of people's ways of understanding the world, as well as to increase understanding about the types of experiences that can trigger changes in the way people make sense of the world (including whether community leadership programs – such as the one you are currently participating in, can trigger such development).

WHAT PARTICIPANTS WILL BE ASKED TO DO AND HOW LONG IT WILL TAKE

Study participants will be asked to complete two psychological instruments upon commencement in the community leadership program and one at the end of the program. Completion of the first two instruments will take approximately 60 minutes. Completion of the final instrument at the end of the program will take approximately 30 minutes. In some cases participants may be asked to undertake a follow-up phone interview after completion of the last instrument (after the end of your program). If you agree to an interview then this will take approximately 30-45 minutes and will be undertaken at a time that is convenient to you.

The instruments that you will be asked to complete are as follows:

- The Washington University Sentence Completion Test (WUSCT) – a measure of your stage of consciousness;
- The Myers Briggs Personality Type Indicator (MBTI) – a measure of your personality preferences.

POSSIBLE BENEFITS FROM THE STUDY

Study participants will be provided with a brief report of their personal results on the instruments and a summary report of the outcomes of the research if they request this. As such, there may be some direct benefits to participants in the form of increased self-awareness and understanding from involvement in this research.

Senior staff of participating programs will be offered a summary report of the outcomes of the research and the pooled results for their particular program. Program staff will not be provided with the results of any individual participants in their program. However, they may be able to utilise the information from this research to improve the leadership development programs for which they have oversight.

The growth of adult consciousness is associated with many adaptive advantages for the individual and society. This research may therefore be able to make an important contribution to individuals as well as researchers and practitioners in the field of adult development.

The short to medium-term aim of this research is to inform the development of programs (such as the community leadership program you are currently participating in) to assist individuals to reach their maximum mental potential (should they wish to do so).

The longer term aim of this research is aligned to the *raison d'être* for community leadership programs – i.e. to assist in the development of a critical mass of people in influential leadership roles to higher levels of wisdom. It is envisioned that this may ultimately create a ‘snowball’ effect of higher level thinking that rolls throughout the institutions, systems and structures of our societies and eventually lifts everyone’s capacity.

POSSIBLE DISCOMFORT OR RISKS

There are no anticipated risks associated with participation in this study. The instruments you will be completing are in common use and the researcher (Niki Vincent) is accredited in their administration/scoring and trained to provide feedback to participants in relation to the results. If you are asked to participate in an interview at the end of your program, then the interview process will be transparent, with no trick questions. The interview will be recorded and the recording will be destroyed once it has been transcribed.

Some participants may experience minor discomfort in the form of anxiety associated with completing the instruments and participants may feel they have been inconvenienced by the time taken to complete the instruments (although this will be carried out during program time) and interview. All data will be kept confidential.

In some cases, leadership program managers may elect to have the researcher conduct a workshop on understanding the Myers-Briggs Type Indicator for use within their program. If so, then participants may

wish to disclose their MBTI results for the purposes of the workshop. However, this will be entirely voluntary and those who choose not to disclose their results will not be disadvantaged in any way and will still be included in the workshop.

WITHDRAWAL FROM THE STUDY

Your participation in this study is completely voluntary and you may withdraw at any time without penalty. Withdrawal will not prejudice your continued involvement in the leadership program that you are enrolled in at all.

CONFIDENTIALITY

The results of the tests that you take and all information provided in the interview (if you are interviewed) will be kept strictly confidential. Only the researcher (Niki Vincent) will have access to your results and your name. Information about your identity will not be stored with the data from your completed questionnaires. You will be assigned a unique identification number that you may use in completing all tests. The list connecting your name and this code number will be kept in a locked filing cabinet separate from the data and will be destroyed once all the data from this and any possible follow-up studies have been collected and analysed. If you are selected for a follow-up interview and you agree to volunteer, you will have the option of choosing a pseudonym that will be used in any publications based on this study. If you do not choose a pseudonym then the researcher will choose one for you.

The results of this research reported in publications and a thesis will not identify any individual participants.

CONTACT INFORMATION

If you have questions or problems associated with the practical aspects of your participation in the project, or wish to raise a concern or complaint about the project, then you should consult the researcher:

Nicola (Niki) Vincent

Mobile: 0439 493 303

Email: nicola.vincent@adelaide.edu.au.

If you prefer, you may consult the supervisor of this research:

Dr Lynn Ward

Phone +61 (08) 8303 3182

Email: lynn.ward@adelaide.edu.au

You may also wish to consult Associate Professor Paul Delfabbro, who oversees ethical approval for research in the School of Psychology at the University of Adelaide. His phone number is 8303 4936 and email is paul.delfabbro@psychology.adelaide.edu.au

INDEPENDENT COMPLAINTS PROCEDURE

This research has been reviewed and approved by the University of Adelaide Human Research Ethics Committee. You may contact the Human Research Ethics Committee's Secretary on (08) 8303 6028 if you wish to discuss with an independent person matters related to:

- Making a complaint, or
- Raising concerns on the conduct of the project, or
- The University policy on research involving human participants, or
- Your rights as a participant

Appendix C: Consent form for participants in the study



THE UNIVERSITY OF ADELAIDE HUMAN RESEARCH ETHICS COMMITTEE

STANDARD CONSENT FORM FOR PEOPLE WHO ARE PARTICIPANTS IN A RESEARCH PROJECT

1. I, _____ *(please print your name)*

consent to take part in the research project entitled: **FACTORS AND PROCESSES INVOLVED IN ADULT CONSCIOUSNESS DEVELOPMENT**
2. I acknowledge that I have read the attached Information Sheet entitled **INFORMATION SHEET FOR RESEARCH PARTICIPANTS - FACTORS AND PROCESSES INVOLVED IN ADULT CONSCIOUSNESS DEVELOPMENT**
3. I have had the project, so far as it affects me, fully explained to my satisfaction by the research worker. My consent is given freely.
4. Although I understand that the purpose of this research project is to improve programs to help people develop to their fullest mental potential, it has also been explained that my involvement may not be of any benefit to me.
5. I have been informed that, while information gained during the study may be published, I will not be identified and my personal results will not be divulged.
6. I understand that I may be contacted by the researcher and asked to participate in a follow-up interview or follow-up studies once I have completed all of the tests at the end of the program.
7. I understand that if I am asked and agree to an interview, this interview will be recorded. I understand that the interview recording will be transcribed (typed up into a document) and the recording will be destroyed once the transcription has taken place.
8. I understand that I am free to withdraw from the project at any time and that this will not affect my participation in the leadership program in which I am enrolled now or in the future.

9. I am aware that I should retain a copy of this Consent Form, when completed, and the attached Information Sheet.
10. I give my consent to be contacted for future studies within the same area as the current study (please tick appropriate box) YES NO

(signature)

(date)

WITNESS

I have described to _____ *(name of participant)*

the nature of the research to be carried out. In my opinion she/he understood the explanation.

Status in Project:

Name: _____

(signature)

(date)

Appendix D: Instructions for test administration

INSTRUCTIONS FOR PROGRAM LEADERS IN ADMINISTERING THE RESEARCH TESTS (STAGE 1 – PROGRAM ENTRY)

The tests need to be administered at the start of your program in a group setting – either early in the first retreat or one of the first program sessions. The tests cannot be sent to participants to complete individually before (or after) the program commences. Please administer the tests at a time when participants are not too tired (i.e. early in the day and early in the retreat).

When preparing for the testing session, you may like to explain a little bit about the research and why your program has chosen to be involved. Please then ask all program participants to read the participant information sheet provided. If they have any questions about the research that you are not able to answer then the participant should feel free to call me on my mobile phone on 0439 493 303 and I will try to respond immediately.

Please encourage all participants to participate in the research as it is important for statistical purposes for me to have around 30 or more participants from each program involved. If you do not have 30 participants in your program (or less than 30 agree to participate) then the statistical analyses will be less powerful (but it is still worth participating in the research as I can pool your data with that from other programs).

Program participants who agree to take part in the research must sign both copies of the consent form and this must be witnessed by one of the program leaders. Participants should keep one copy of the consent form and the information sheet for their records. The other copy of the consent form must be attached with a paperclip to their completed test forms.

Please assign each of the people who consent to take part in the research with a number that they can use instead of their name when completing the tests. Please keep a list of the numbers and the name of the participant assigned each number and post this list to me along with the completed tests. This list will be kept separately from the completed test results.

Participants need to write their number on the front of each of the tests and fill in the other demographic information requested on the front cover. They do not write their name on the tests (although if they want to do so then this is fine). Please check to ensure that the participants have written the correct number on the front of each of their test forms (MBTI and WUSCT) when they return them to you.

If you are agreeable, then it would be really helpful if you as program manager and any other staff who are involved in the development and/or delivery of the program could also take the tests. If you agree to do so then please assign yourselves a number as you do for the participants and complete the tests at the same time and send the completed tests back to me with those of the participants. Please indicate on the cover of your test forms that you are a program leader.

There are only two tests that need to be completed. These are the Myers Briggs Type Indicator (MBTI) and the Washington University Sentence Completion Test (WUSCT). Participants need to complete both tests in order to participate in the research – i.e. they cannot participate by completing one or other of the tests. They must complete both.

You will need to allow approximately 60 minutes for the completion of the two tests. Please do not allow any talking during the testing session.

When administering the WUSCT please ask participants to carefully read the instructions on the front of the test. Please do not give participants any further instructions about completing this test. They are simply asked to complete the sentences. There are no right or wrong answers. This should take approximately 25 minutes.

When administering the MBTI, please ask participants to carefully read the instructions on the front cover of the test (please read these instructions yourself so that you are familiar with them and contact me before the testing session if you have any questions). Participants should be asked to complete the test with the mindset of how they normally behave in circumstances where they are neither very stressed nor very relaxed. Please ask them to complete all questions – even if it is really hard to do so. If they skip any then they need to go back and complete them before they finish. There are no right or wrong answers. Once they have finished completing the MBTI they can score the test if they want to – or they can leave this to me. Participants should only score the test if they are confident that they understand the instructions on scoring. This test should take approximately 30 minutes to complete.

Once participants have finished the WUSCT they can go on to the MBTI – even if others are still working on the WUSCT.

When participants have completed both tests, they should be asked to hand them in to you and then leave the room to allow others who are still working to complete their tests without interruption. It is important that there is no talking allowed while participants are completing the tests.

Once all participants have finished, please check to ensure that everyone who was issued the tests has handed the completed tests back to you along with a copy of the consent form clipped to the two tests.

Please place the completed tests and consent forms in the reply paid envelope supplied and post it back to me as soon as possible – along with any unused test forms (the MBTI forms cost \$18 each – so please return any that you do not use to me).

Scoring of the tests will take some time and so reports for participants may not be available for a couple of months. However, I will endeavour to get these to participants as soon as possible.

If you have any questions about the administration of the tests then please don't hesitate to contact me on 0439 493 303 or email niki.vincent@lisa.com.au.

Niki Vincent

INSTRUCTIONS FOR PROGRAM LEADERS IN ADMINISTERING THE RESEARCH TEST (STAGE 2 – PROGRAM EXIT)

The test needs to be administered at the end of your program in a group setting – either at the closing retreat or the last program session. The test cannot be sent to participants to complete individually before (or after) the program closes. Please administer the test at a time when participants are fresh and likely to be at their cognitive best (i.e. not after a night of farewell partying!).

When preparing for the testing session, you may like to refresh participants' memory about the research and why your program has chosen to be involved. Please then ask all participants who completed the research instruments at the first testing session to take part in the final session (participants are free to decline to be involved in the second testing if they took part in the first testing but please try to encourage them all to participate as this is very important for statistical purposes).

Participants have been assigned an identification number in the research and a list of these has been included in this testing kit. Participants need to write their number on the front of each of the tests and fill in the other demographic information requested on the front cover (some participants did not fill in all this information last time around, so it is important that they do so this time). They do not need to write their name on the tests. When participants return the form to you, please check to ensure that they have written the correct number on the front of each of their test form and have filled in the other information. Please also do this yourself if you took part in the first testing session.

There is only one test that needs to be completed. This is the Washington University Sentence Completion Test (WUSCT) – Part 2. Please note that there are different versions of this test for males and females.

You will need to allow approximately 25 minutes for the completion of the test. Please do not allow any talking during the testing session.

When administering the WUSCT please ask participants to carefully read the instructions on the front of the test. Please do not give participants any further instructions about completing this test. They are simply asked to complete the sentences. There are no right or wrong answers. Completion should take approximately 25 minutes. Please encourage participants to complete the test within 30 minutes (unless they have a disability or other circumstances which would make it hard for them to do so).

Please remind participants that there are 18 sentence stems to be completed on both sides of the page.

When participants have completed the test, they should be asked to hand it in to you and then leave the room to allow others who are still working to complete their test without interruption. It is important that there is no talking allowed while participants are completing the test.

Once all participants have finished, please check to ensure that everyone who was issued the test has handed the completed test back to you. Please also check that participants have completed all 18 sentence stems on both sides of the page.

Please post the completed tests to me as soon as possible. You can destroy any unused test forms.

Scoring of the tests will take some time and so reports for participants and program summaries will be sent to you in [insert month and year].

If you have any questions about the administration of the tests then please don't hesitate to contact me on 0439 493 303 or email niki.vincent@lisa.com.au.

Niki Vincent