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CONCEPTUAL AND METHODOLOGICAL ISSUES
IN SELF-EFFICACY THEORY

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Thesis submitted in fulfilment of the
requirements for the Degree of
Doctor of Philosophy

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July
1983

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SUMMARY

Self-efficacy theory, proposed within the framework of social learning theory by Bandura (1977a), argues that individuals have specific "efficacy expectations" concerning their ability to perform particular activities, and that these expectations are major proximal determinants of behaviour. Efficacy expectations arise from information obtained from previous performance, from observation, from linguistic information, and from interpretations of physiological arousal. The efficacy expectation is a complex synthesis of this information, and is modified by the input of new information. Bandura argues that all behaviour change results from the modification of efficacy expectations.

The theory has empirical support across a wide range of behavioural domains, but there are some points of contention. This thesis reviews the current literature within the self-efficacy framework, and that which is directly critical of it. Several contentious issues, both theoretical and methodological, are identified and addressed, and a series of experiments which reflect on these issues is presented. A number of substantive areas are used in these experiments, but assertiveness training is the major area. Therefore, after the presentation of the theory and review of the self-efficacy literature, but before the experimental evidence concerning self-efficacy is presented, there is a review of the assertiveness-training literature and a description of an assertiveness training programme from which much of the self-efficacy data were collected. (For each issue related to efficacy theory, data from this assertiveness training programme are presented, as well as data from other experimental situations.) After this description, the thesis returns to contentious issues for self-efficacy theory, and presents nine experiments. Six of the experiments are concerned with the theoretical

issue of the accuracy with which efficacy expectations predict later performance. Bandura's theory argues that efficacy expectations, as proximal determinants of behaviour, are more accurate predictors than are previous behavioural measures or other cognitive measures. The first two studies examine the accuracy with which self-efficacy predicts maintenance of behaviour change. The first, dealing with the assertiveness training programme, finds efficacy expectations to be highly accurate predictors; the second, which deals with maintenance of physical activity following fitness training, does not find a strong relationship between efficacy and maintenance of activity. It is argued that the participants in the second study did not have sufficient knowledge of or control over the constraints on exercising which would arise in this natural setting, and that unexpected changes in situation may have had a strong mitigating influence on the relationship between efficacy and maintenance of activity.

Having established that efficacy expectations do predict behaviour, at least in highly structured and predictable situations, the thesis turns to a consideration of an important methodological problem, that of the reactive effects of measuring self-efficacy. Three experiments examine the extent to which the measuring of efficacy expectations affects performance. One involves a snake handling task, one the assertiveness training programme, and the third an assertiveness testing session, all with first-year psychology students. The conclusion reached is that there are reactive effects of measurement, and that these effects appear to change in a regular manner as familiarity with the situation increases, but seem unrelated to an individual's level of skill.

The thesis then returns to theoretical questions, and four further studies dealing with the accuracy with which efficacy predicts behaviour

are presented. Two studies examine the relative accuracy of efficacy expectations and behavioural measures as predictors of later behaviour. Data from the assertiveness training study indicate that, contrary to the theory's prediction, behavioural measures are much more accurate predictors than are efficacy measures. The second study, involving a group of girl gymnasts preparing for a competition, however, does support the theory. Efficacy expectations are found to be better predictors of competition performance than are behavioural measures from previous competitions. It is suggested on the basis of these conflicting findings that the relationship between efficacy and behaviour is more complex than the theory might suggest, and that a number of other variables might influence these relationships. The precision and valence of obtained feedback, and the individual's levels of skill and motivation, are suggested as variables which may influence the relationship between efficacy expectations and behaviour.

The final two studies examine the relative predictive accuracy of efficacy expectations and outcome expectations. It has been suggested that outcome expectations may be more important predictors than efficacy expectations, or that the two types of expectation may interact in some way in producing behaviour. The two studies, one involving an assertiveness-assessment session and the other a snake-handling task, were similar in design. Undergraduate students served as subjects, and each completed measures of efficacy and outcome expectations before performing a behavioural test. In both cases, efficacy and outcome expectations were correlated, but efficacy expectations alone were better predictors of outcome than were outcome expectations alone or an additive or multiplicative combination of the two. Thus, there was no support for the idea that outcome expectations might predict behaviour either better than or independently from efficacy expectations.

The nine studies examine several aspects of self-efficacy theory, and the final chapter attempts to bring these aspects together into an overall assessment. It is concluded that self-efficacy theory has in general been supported by these findings, but that there appear to be other variables which influence the precise relationship between efficacy and behaviour. It is suggested that further research might focus on the effects of feedback clarity and valence, of skill level, of modelling, and of variations in goal setting on the relationship between efficacy and behaviour. If the effects of these variables could be clarified and integrated into the model, the accuracy and applicability of self-efficacy theory would be likely to be increased.