

# Understanding the Components in Social Behavioural Change

Implications for Non-profit Organisations

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*Abstract: In this paper we investigate the relationship between intrinsic motivation, extrinsic motivation and government influence with the over riding objective of developing more effective and efficient social behavioural change programs that have been instigated by public sector environmental management organisations. Based on the notion of intrinsic and extrinsic motivation, which has previously been shown to explain attitudes and behaviour associated with environmental issues, we extend the analysis in this paper to include the Influence of government. A survey of a random sample of 566 land-managers in South-eastern Australia was conducted and the data collected subsequently analysed using a structural equation modelling approach. The model that was developed identified the relationship between intrinsic motivation, extrinsic motivation and government influence.*

Keywords: Motivation, Change Management, Not for Profit

## Introduction

**P**OLICY-MAKERS HAVE INTRODUCED a variety of programs designed to arrest and reverse land and water degradation in rural landscapes however, there is a need to understand the process whereby groups and individuals adopt sustainable management practices. Research has reported that there are considerable variations in the individuals' capacity to make the necessary changes. Consequently, there is a need for a strategy to ensure that individuals are equipped with the appropriate skills and resources so that they can successfully adopt sustainable land management practices (Cary et al. 2002).

## Social Behavioural Change

Social behavioural change has been identified as a fundamental key in rectifying environmental degradation. The importance of the environmental management problem and its cost in financial terms has been identified in key public policy statements (AFFA 2005; UN 2005). The issue has become part of government policy via the complex 'top-down' and 'bottom-up' pathways by which public concerns, in this case damage to the environment, pass through before enactment. As considerable public funds are being expended and the enormity of the problem is realised by many, it has become apparent that the response to the problem must be effective at an operational level and meet government policy objectives (Elder 2001). Community awareness of this environmental problem has continued to increase (Edwards

& Byron 2001) while in many cases the funding level for control measures has steadily decreased (Cary & Wilkinson 1997; Dunn et al. 2003).

## Environmental Issues and Land Management

The environmental issue becomes more complex as many of the control programs rely on landholders' cooperation, as they are required to be more engaged in and responsible for, addressing land management environmental problems while, many of these landholders are recalcitrant with regard to this assigned duty. It is believed that policies to change motivation and activate the stewardship ethic are unlikely to succeed while there are economic barriers operating against such moves (Dunn et al. 2003). The expectation that landholders will do 'public good' and 'public benefit work' for little reward is against their self-interest and unlikely to eventuate (Cary, Webb & Barr 2000).

## Influence of Government Agencies

Government financed agencies realise that there is an important need for resolving environmental management problems and there are decreasing resources being assigned to the task. Consequently, there is a need for more effective use of the limited resources available for addressing the problem. Specifically, the management problem that has been identified is that there is a need for more effective



and efficient social behavioural change programs instigated by public sector environmental management organisations.

Environmental management often involves widespread social issues and studies have shown that agencies are effectively utilising social marketing strategies for public policy development and implementation (Geller 1989; Kotler et al. 2002). Extensive research has been undertaken to examine how governmental bodies can bring about more responsible pro-environmental behaviour (Reeve 1993; Pieters, Bijmolt et al. 1998; Beedell & Rehman 1999). Individuals with high levels of natural resource knowledge have been shown to demonstrate more effective pro-environmental behaviour than those individuals who express pro-environmental feelings alone (Rokicka 2002). This suggests that if environmental management is to be successful, the information needs of stakeholders are an important consideration.

### **Influence of Stakeholders**

Stakeholder theory identifies the complications that can arise when there are multiple opinions and interests involved in gaining acceptance of public policy (Freeman 1984; McIntosh 1990; Polonsky 1995; Stoney 2001). The task becomes more difficult to address when there are a number of stakeholders with diverse opinions relating to the problem. Subsequently, these disparate viewpoints can also lead to an ineffective consideration of all stakeholders' interests and introduce inherent difficulties into the implementation stage.

Coordination of policy development activities becomes even more critical as most public policy regulations involve complex, and sometimes competing, sets of stakeholders and interests.

### **Motivation and Environmental Management**

The concepts of intrinsic motivation and extrinsic motivation have been shown to provide insights into the environmental behaviour of various groups. For example, individuals who practice environmentally responsible behaviour (conserve resources, purchase environmentally safe products and recycle) out of choice and personal interest are more likely to maintain the practice without the presence of extrinsic rewards to motivate them to continue (DeYoung 1986a, 1986b; Seguin et al. 1999). This is consistent with the intrinsic motivation literature discussed within the psychological area (Deci and Ryan 1985; Deci and Ryan 2000; Ryan and Deci 2000).

### **Intrinsic Motivation**

It is proposed that landholders that have internalised motivation may be more likely to provide evidence that they have adopted a number of recommended practices and are likely to continue with this adoption and therefore show durable environmentally responsible behaviour. (DeYoung 2000; Tucker & Spiers 2003, Osbaldiston & Sheldon 2003; Seguin et al. 1999). Other researchers have claimed that intrinsic motives to adopt socially desirable environmental behaviour can be nurtured and developed (DeYoung 2000, 1993, 1986b; Vining & Ebreo 1990). Research has reported that an individual's conservation behaviour could be changed from being initiated and maintained by extrinsic motives toward being influenced by intrinsic motives (Vining & Ebreo 1990). This is important as it suggests that individuals can be 'moved' along the Deci-Ryan self-determination continuum that is, from low internalisation of motives (extrinsically motivated) to being more intrinsically motivated.

Studies have shown that there are other links between the psychological motivation literature and socially desirable environmental behaviour research (Pelletier 2002; Pelletier et al. 1998). Studies investigating the SDT motivation types namely, amotivation, extrinsic motivation and intrinsic motivation, have provided evidence that the more internalised types of motivation were associated with a higher likelihood that targeted audiences would become involved in socially desirable environmental behaviour (Pelletier et al. 1998).

### **Extrinsic Motivation**

Extrinsic motivation is employed in many social change programs. The offerings of rewards and/or punishments to encourage and discourage behaviour are frequently used in these programs (Cook & Berenberg 1981; DeYoung 1993; Kotler, Roberto & Lee 2002; Urdan 2003). The use of extrinsic motivation through the use of incentives and disincentives is useful for promoting environmentally responsible behaviour and there are many reports on interventions designed to encourage environmentally responsible behaviour (Beedell & Rehman 1999; Boyle 2003; Dunn et al. 2003). The outcomes of many of these programs have been scrutinised (Cary et al. 2002; Stewart and Jones 1999; Dwyer et al. 1993), and it appears that ongoing success requires continual application to ensure that the behavioural change continues (Curtis 2000; DeYoung 1993). While there is a role for incentives or positive reinforcers within environmental management programs to initiate and encourage conservation behaviour, these incentives are unable to produce a durable behaviour change (Dwyer et al. 1993; Curtis 2000). The part played

by the Government agencies is usually to encourage the adoption of environmental social marketing practices by providing information, advice and incentives to facilitate this change process.

**Aim of this Study**

The aim of this study is to evaluate the relationships between Intrinsic Motivation, Extrinsic Motivation and Government influence. In addition the study will examine the inter-relationship between intrinsic and extrinsic motivation in environmental management.

**Sample**

A random sample of 456 land-managers in South-eastern Australia was obtained and a questionnaire developed as a result of intensive qualitative research, including focus groups, in-depth interviews, and a thorough review of secondary resources. Respondents were interviewed by telephone and the questionnaire was piloted and pre-tested before being administered. All questions were rated on a ten point semantic differential scale.

**Analysis**

Exploratory factor analysis (EFA) was conducted prior to confirmatory factor analysis (CFA). Bartlett’s test of sphericity (<0.05) and the Kaiser-Meyer-Olkin test (>0.6) were used to ensure that it was appropriate to use factor analysis. The EFA was performed using maximum likelihood estimation with a Direct Oblimin rotation. Factors with latent roots (Eigenvalues) greater than one were considered significant, and the scree plot was also examined (Hair et al., 1998). Following the EFA and CFA using AMOS 5.0, estimations were conducted to confirm that the model was a satisfactory fit of the data. The factor loadings and goodness-of-fit measures obtained in the CFA

indicated that convergent and discriminant validity was established. Each of the items was constrained to load on only its associated factor (Kline 1998) and the results of the EFA, and the three dimensions were permitted to correlate. In assessing the measurement model, goodness-of-fit and the estimation of parameters of the model were the primary goals (Hu & Bentler, 1999). The Chi-square statistic supplemented with other fit statistics including: Goodness-of-fit (GFI); Adjusted goodness-of-fit (AGFI); Root mean square residual (RMR); Root mean square error of approximation (RMSEA); Tucker-Lewis index (TLI); Normed fit index (NFI); Comparative fit index (CFI); and Akaike Information Criterion (AIC) were used to assess the goodness-of-fit of the model. Hu and Bentler (1999) advocated values greater than 0.95 for GFI, AGFI, CFI, TLI and NFI as a minimum threshold that can be used to conclude that there is a relatively good fit between the hypothesised model and the data. RMSR and RMSEA values of 0.08 or less indicate adequate fit.

**Results and Discussion**

Three factors were extracted with Eigenvalues greater than one (2.9 for government, 1.3 for intrinsic motivation and 1.0 for extrinsic motivation). The percentage of variance accounted for by the model was 73.5 the percentage of variance extracted per dimension was 42, 18 and 13 for Government, Intrinsic motivation and Extrinsic motivation, respectively. The measurement model is shown in Figure 1. All of the fit statistics, met the acceptable cut-off criteria, and all of the critical ratios were significant. There was discriminant validity for each of the dimensions, with the average variance extracted from Government (0.85), Extrinsic motivation (0.37) and Intrinsic motivation (0.42) being greater than the square of any of the loadings on the paths between them.

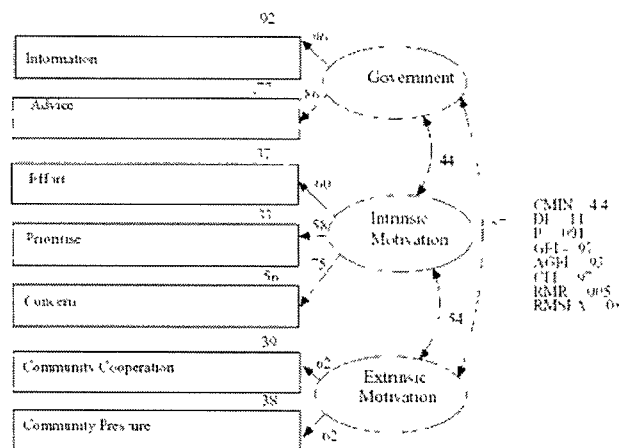


Figure 1: Measurement Model

## Conclusions

The implications of the findings from this research are considered as being significant as this research presents a new paradigm in social marketing research. The MOA model as conceptualised by Rothschild (1999) suggested that behaviour was related to motivation, opportunity and ability. Our findings build on this model by acknowledging the significant influence that governments may have in social marketing programs. The results identify the relationship between intrinsic motivation, extrinsic motivation and government influence.

As a consequence this preliminary study presents a valid and uni-dimensional instrument that can be

used in future research to measure each of the dimensions of the higher order multidimensional construct of behaviour. However, further research is needed to develop additional items to reflect other dimensions apart from motivation that will influence behaviour such as opportunity and ability that has been identified in the social marketing MOA framework conceptualised by Rothschild (1999) and discussed by Binney, Hall and Shaw (2003). By incorporating the effect of government within the MOA framework it is anticipated that new insights will be obtained that will provide a clearer understanding of the behaviour of individuals within a social change context.

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