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Spillover between pro-environmental behaviours: The role of resources and perceived similarity

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ABSTRACT

Pro-environmental behavioural spillover – when performing one pro-environmental behaviour (PEB) increases the likelihood of performing another – has been identified as a possible way to increase the amount of environmentally friendly behaviours that individuals perform. The current research investigated this spillover process, the role of chronic environmental motivations, goal priming and behavioural similarity. Three studies (two conducted with students and one conducted with the general Australian public) provided evidence to suggest that positive spillover occurs between PEBs that are similar in terms of the resources required to perform them, but not between PEBs that are resource-dissimilar. There was no evidence to suggest that negative spillover (the instance where performing one PEB lessens the likelihood of subsequently performing another) occurred. Chronic environmental striving seems to independently influence the performance of PEBs, especially spending time to be more environmentally friendly. The role of priming goals in the spillover process remains unclear.

1. Introduction

According to the latest Intergovernmental Panel on Climate Change report, there is increased evidence to suggest climate change is already affecting our natural and human systems (IPCC, 2014). The report further notes that this is occurring as a result of human activities. In order to lower the greenhouse gas emissions that contribute to anthropogenic climate change, individuals must adopt more environmentally friendly lifestyles (Barr, Shaw, & Gilg, 2011; Bratanova, Loughnan, & Gatersleben, 2012; Stern, 2000). A crucial component of this includes performing multiple pro-environmental behaviours (PEBs) in everyday life (Steg & Vlek, 2009; Whitmarsh & O'Neill, 2010). Unfortunately, it is often the case that performing PEBs are considered more difficult, or more effortful than performing more environmentally harmful, yet habitual behaviours (Thøgersen & Crompton, 2009). Steg, Bolderdijk, Keizer, and Perlaviciute (2014) noted that performing an environmentally friendly behaviour is often at odds with hedonic goals. For example, in many cities, catching public transport can be more time consuming and cost more money than driving, or at least it is perceived as such by frequent drivers (Fujii, Garling, & Kitamura, 2001). Therefore, the challenge facing industrialised societies is how to encourage the adoption of *multiple* PEBs amongst individuals.

One way to achieve this is via a positive 'spillover' between PEBs (Thøgersen, 1999, Thøgersen & Ölander, 2003; Whitmarsh & O'Neill, 2010). Spillover occurs when the performance of one PEB leads to the performance of another PEB (Thøgersen, 1999). In this paper, we examine the psychological mechanisms underlying spillover processes based on the conceptualization of pro-environmental behaviour as goal-*directed* and *resource-enabled*. In this paper, we test the hypotheses that spillover is likely to occur when the first and second PEBs are perceived (a) to complement each other in pursuit of the overarching goal of environmental sustainability, and (b) to draw on the same type of resources that enable their performance. Three studies are derived to test these predictions.

1.1. Pro-environmental behavioural spillover

PEB spillover is defined as the phenomenon in which the performance of one PEB affects the likelihood of the performance of another future PEB (Thøgersen, 1999; for a recent review, see Truelove, Carrico, Weber, Raimi, & Vandenbergh, 2014). When the first PEB increases (or decreases) the likelihood of a second PEB, it is

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called a positive (or negative) spillover. Although a number of social psychological theories have been used to suggest the occurrence of positive and negative spillovers, (see Truelove et al., 2014), we build on the recent goal theoretic approach to spillover (Lanzini & Thøgersen; 2014; Thøgersen & Noblet, 2012), and extend it by incorporating a resource theoretic consideration (e.g., Kaiser, Byrka, & Hartig, 2010; also see Campbell, 1960). Our basic contention is that PEBs are potentially directed at attaining the same goal of environmental sustainability (i.e., preserving or improving the natural environment); however, their performance needs to draw on resources. These resources may include such tangibles as money, and/or intangibles such as time (e.g., Foa & Foa, 1974, 1980). Whereas the sustainability goal provides a pull for PEBs, the resource considerations can enable or constrain the performance of PEBs. We therefore suggest that spillover can be better understood when the goal-based and resource-based issues are both taken into consideration. We first describe goal theory and its implications for spillover, followed by a discussion about resource-based considerations.

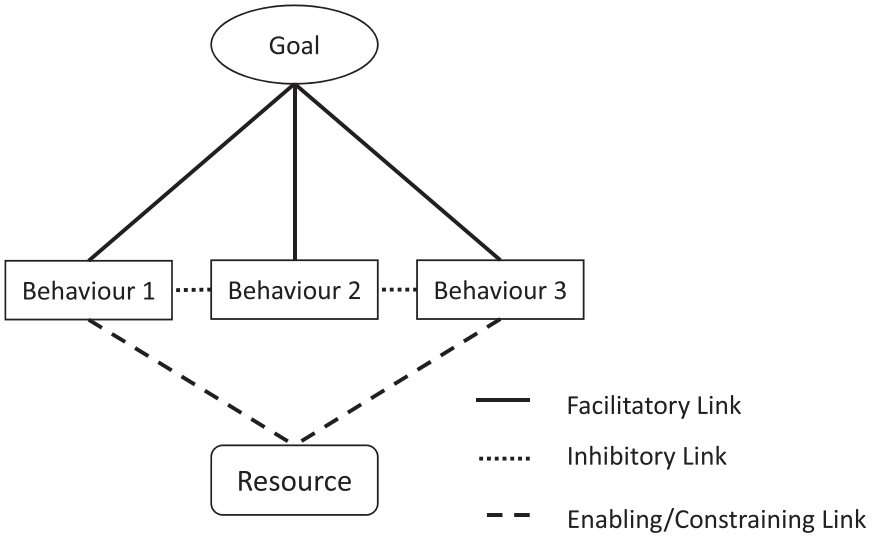
1.2. Goal theory and spillover

According to goal theory, goals are cognitive representations of a specific desirable end point and they are structured in a hierarchical manner (e.g., Kruglanski et al., 2002). The hierarchy is structured such that a goal subsumes concrete behaviours which are seen to be instrumental for attaining the goal (e.g., Kruglanski, et al., 2002; Shah & Kruglanski, 2003; also see Kashima, Paladino, & Margetts, 2014, Fig. 1 presents a simplified view of a goal hierarchy). According to Kruglanski et al. (2002), vertical links connect goals to behaviours, whereas horizontal links connect behaviours to behaviours. The activation of an element (e.g., behaviour 1) facilitates the activation of another element linked to it by a facilitatory link (i.e., goal), but inhibits the activation of another element connected via an inhibitoary link (i.e., behaviour 2). In this view, the performance of one PEB (e.g., behaviour 1) may negatively spillover to the performance of another PEB connected via an inhibitory link (e.g., behaviour 2). This is because the activation of behaviour 1 inhibits the activation of behaviour 2. However, the performance of behaviour 1 may positively spillsover to behaviour 3. This might be possible if the goal is activated when behaviour 1 is performed, then the simultaneous activation of behaviour 1 and goal may result in an overall facilitation of the performance of another behaviour 3. In this case, the spillover would be due to the facilitatory links from behaviour 1 to goal and then from the goal to behaviour 3, producing a net positive effect on the activation of behaviour 3.

1.2.1. Positive spillover

Thus, activating the pro-environmental sustainability goal may facilitate a positive spillover by activating the facilitatory links between the two behaviours and the goal. Fishbach, Zhang, and Dhar (2006) provide supportive evidence for this line of reasoning. In one of their studies, they asked participants to evaluate the likelihood of performing one behaviour (e.g., having a light dinner) when they have performed another behaviour linked to the same goal (e.g., having a light lunch). They were more likely to say they would perform the second behaviour (i.e., having a light dinner) when the goal that connects the two behaviours (i.e., keeping in shape) was activated than when it was not. Although this notion has not been tested in the context of environmental behaviour to the best of our knowledge, if an individual performs one PEB and the pro-environmental goal is activated, this may lead to a positive spillover.

Indeed, Thøgersen's argument (2004) may be construed in this vein. Framing this in terms of cognitive dissonance, Thøgersen (2004) noted that if individuals fail to see that the two behaviours are linked to a common goal, they may not experience cognitive dissonance when performing one and not the other. Likewise, the findings of Cornelissen, Pandelaere, Warlop, and Dewitte (2008) support the idea that positive spillover from one PEB to another PEB is likely to occur when people are made aware of the fact that those PEBs were indeed complementary to each other in attaining the overarching goal of environmental sustainability. These authors noted that individuals commonly do not realise that many of the behaviours that they perform in everyday



Note. Behaviour 1, 2, and 3 are instrumental for achieving a goal; Behaviour 1 and 3 draw on the same type of resource. Resources for behaviour 2 are not shown in this figure.

Fig. 1. Goal-resource structure. Note. Behaviour 1, 2, and 3 are instrumental for achieving a goal; Behaviour 1 and 3 draw on the same type of resource. Resources for behaviour 2 are not shown in this figure.