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Analysis

Look at me Saving the Planet! The Imitation of Visible Green Behavior and its Impact on the Climate Value-Action Gap☆

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ABSTRACT

Examining the regional distribution of 15 different Greenhouse Gas Mitigation Practices (MPs) across Australia, we study the tendency for consumers to imitate visible pro-environmental behavior in their local region. While there is a great deal of variation in the specific type of MPs adopted by consumers located in the same region, ANOVA results suggest that they tend to adopt a similar number of MPs as their neighbours. Using discrete choice modelling, our results suggest that this is due to the peer adoption of certain visible MPs, such as using public transport or car-pooling, encouraging agents to adopt other types of visible MPs. However, the character of this spillover is limited in that visible pro-environmental behavior does not appear to influence the adoption of non-visible MPs. We also find that social imitation patterns help individuals overcome the observed gap between their stated concern about climate change and their propensity to act on this concern, known as the climate 'value-action' gap. Policy implications for designing effective green nudges are discussed.

1. Introduction

The recent establishment of the United Nations Framework Convention on Climate Change in 2015 has given renewed impetus to global efforts to mitigate climate change (Kinley, 2017). In terms of promoting sustainable consumption, most of the debate has focussed on how governments can regulate or provide pecuniary incentives to reduce the carbon footprint of households (Bertram et al., 2015; Wagner, 2006). Beyond government action, non-state market adaptation processes, i.e. how consumers and producers themselves may act to better adapt to climate change, are increasingly being recognized as central to national climate change strategies (Jackson, 2005; Kinzig et al., 2013). An open question here is how the prosocial nature of humans can be harnessed to encourage consumers to voluntarily reduce their carbon footprint. Considerable evidence suggests that humans possess a behavioral predisposition to cooperate, share resources and make sacrifices for the greater good (Richerson and Boyd, 1998; Ostrom, 2010). Throughout human history, this tendency has played an important role in enabling the human species to thrive and prosper (Gowdy and Krall, 2015). Moreover, the voluntary adoption of Greenhouse Gas Mitigation Practices (MPs), such as using public transport, saving electricity and insulating houses, has the potential to significantly reduce household carbon emissions by as much as 20% (Dietz et al., 2009). There is also ample evidence of widespread concern about climate change in the population: survey after survey conducted around the world suggests that most individuals do accept that climate change is real and most express at least some level of concern about it (Nisbet and Myers, 2007; Reser and Swim, 2011; Brechin and Bhandari, 2011; Leviston and Walker, 2012). How can this concern and behavioral predisposition to act in a prosocial nature be effectively harnessed to effectively encourage consumers to voluntarily adopt MPs? (Etzioni, 1999, 2004; Thøgersen, 2006).

A major issue in this regard is the so-called climate 'value-action' gap: a ubiquitous phenomenon where people express concern about the environment but often display little commitment to change their own behavior accordingly (Barr, 2006; Flynn et al., 2009). This gap is seen as an important behavioral barrier to climate change adaption (Gifford, 2011; Productivity Commission, 2013; Markowitz and Shariff, 2012).

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We argue the existence of the climate value-gap can be seen as a learning problem, in the sense that learning is a process of behavior adapting to a changing environment, which individuals may have as they lack the pecuniary resources, know-how or self-confidence to align their consumer lifestyles with their stated concern about climate change (Barr, 2006; Gifford, 2011; Chai et al., 2015). Factors that have been posited to inhibit learning and contribute to the locked-in nature of current consumption patterns include: pre-existing technology and anti-environmental social norms (Lintott, 1998; Røpke, 1999; Sanne, 2002; Myers and Kent, 2003; Steinhilber et al., 2013), individual habits (Maréchal, 2010), basic ignorance (Brown and Cameron, 2000; Gifford, 2011), status concerns (Frank, 2001), rising affluence, lack of discretionary time (Chai et al., 2015) and tragedy of the common scenarios (Wagner, 2006).

One important factor that can shape the consumer learning process is the social environment through which consumers can learn new behaviors by imitating others (Bandura, 1977; Richerson and Boyd, 1998; Babutsidze, 2012; Babutsidze and Cowan, 2014). Many argue that social norms and imitation processes have real potential to help in the diffusion of pro-environmental behavior (Janssen and Jager, 2002; Welsch and Kühling, 2009; Schwarz and Ernst, 2009). Modelling also suggests that consumers could adopt environmentally friendly goods even when these goods are relatively more expensive and less hedonistically attractive to other goods (Buenstorf and Cordes, 2008; Cordes and Schwesinger, 2014). From this perspective, the tendency to imitate others could be idealistically interpreted as part of a adaptation process through which consumers learn to act in a manner that is in line with their underlying concern about climate change. This study empirically investigates this issue by shedding new light on the manner in which agents learn and imitate the green behavior of their peers. We define 'peers' as other people that respondents may observe and interact with in their local region. Using Australian data on climate change perceptions and mitigation behavior (Reser et al., 2012), we seek empirical evidence for the existence of a peer imitation process and further examine what underlying motives may drive this imitation process.

Beyond the possibility that the imitation of green behavior is driven by the individual's concern about climate change, another possibility is that imitation behavior may also be driven by a wish to attain social status among peers. Status-seeking is often perceived as a wasteful aspect of modern consumer culture (Veblen, 1899; Frank, 2001; Tilman, 1999; Woersdorfer, 2010). However, a number of recent studies argue that this tendency can be harnessed to promote pro-environmental behavior (i.e. Griskevicius et al., 2010; Mazar and Zhong, 2010; Sexton and Sexton, 2014; Brick et al., 2017). Here it is worth noting that there are potential downsides to harnessing status-seeking behavior in order to encourage the adoption of MPs. Firstly, these changes may not be permanent and could be reversed (Thøgersen and Crompton, 2009). If consumers adopt MPs as a way of signaling to others, then future changes in their role models or the messages they are exposed to in their social environment could reverse such behavior in the future (Janssen and Jager, 2002). Moreover, status-driven imitation behavior could also grow the value-action gap, in the sense that consumers could adopt a level of MPs that is disproportional to the level of underlying concern they have about climate change. Ultimately, the value-action gap is overcome when people act on their climate change concerns such that those who are very concerned about climate change are more proactive than those who are not concerned about climate change (usually a small minority).

Building on a previous study (Chai et al., 2015), this paper empirically investigates the extent to which the observation of green behavior by peers in the local environment can transform the character of consumer lifestyles and what impact it has on the climate value-action gap. Whereas the previous study considered how time, household income and the individual learning process influenced the size of the value-action gap, it did not consider the possibility that the value-action gap may be influenced by the behavior of peers in the local environment and their propensity to adopt green behaviors. Therefore, examining the expressed concern about change and the adoption patterns of 15 different visible and non-visible MPs, we use a discrete choice model to explore how peer behavior in local regions may trigger consumption 'spillovers' – i.e. changes in a range of other consumption domains (Thøgersen, 1999; Thøgersen and Ölander, 2003). We also explore whether the imitation process is driven by intrinsic motivations or status concerns by considering the extent to which these consumption spillovers are limited to the adoption of certain types of MPs that are visible to peers or whether they trigger the adoption of both visible and non-visible MPs.

This paper is structured as follows. Section 2.1 briefly reviews the evolutionary origins of social norms and how imitation behavior may be driven by various behavioral processes, including social observational learning and social signalling behavior. Section 2 discusses the data and the methodology for testing the hypotheses. Section 3 reports the results, while Section 4 provides a discussion and the policy implications. Section 5 concludes.

2. Material and Methods

2.1. Theoretical Context and Hypotheses

We investigate three related questions: First, do people imitate the green behavior of others in their local neighbourhood? Second, if they do, what type of imitation process best accounts for the observed characteristics of the imitation patterns? Third, what impact does this process have the observed climate value-action gap? In the following we define 'imitation' as the general behavioral tendency for agents to adopt MPs after observing peers adopt MPs in their local environment. The underlying principle here is simple: What type of actions I take is influenced by the observed actions taken by others. Due to the likely presence of spillover effects discussed in detail below, we do not define imitation as being the adoption of precisely the same type of MP as observed in their local environment. This is because individual differences in lifestyles, consumption knowledge and constraints that could result in heterogeneity in the manner in which agents imitate the observed green behavior by peers.

The general tendency for people to imitate others and follow social norms – rules of behavior considered acceptable by others – is considered to be a fundamental aspect of human culture that can both hinder or help ongoing efforts to achieve sustainability (Røpke, 1999; Sanne, 2002; Kinzig et al., 2013). It reflects the pro-social nature of humans that is found to play an important role and ranges from experimental one shot games (Fehr et al., 2002; Henrich et al., 2006) to altruistic behavior in the form of anonymous gift giving (Burnham, 2003).[1] Given this evidence, we argue that the tendency to adopt MPs is likely influenced by how many of their peers in the local regions also adopt MPs. As a result, we hypothesize that there is a tendency for people living in the same region to adopt a similar number of mitigation practices (Hypothesis 1). In other words, social norms relating to pro-environmental behavior emerge on the regional level and may vary significantly across regions.

Research suggests that certain conditions are important to foster the emergence and diffusion of pro-environmental norms. The first is the frequency of observing the green behavior of others in the local area. The more peers engage in visible green behavior, the more likely it is that an agent living in the same area will imitate such behavior (Biel and Thøgersen, 2007). Beyond whether or not peers adopt MPs, another contributing factor is the probability of interacting with peers in the first place (Boyd and Richerson, 1988; Janssen and Jager, 2002) –

[1] Although pervasive, attempts to effectively appeal to this pro-social nature via environmental social marketing campaigns is difficult (Lorenzoni et al., 2007; Corner and Randall, 2011).