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Abstract

This research addresses the role of perceived distance of climate change impacts as an antecedent of pro-environmental behaviour using data from a large, representative survey. Doing so, it complements existing research that has largely concentrated on environmental concerns, beliefs and behavioural intentions. Focusing on temporal and spatial distance dimensions, it finds that differences in perceptions are reflected in differences in self-reported pro-environmental behaviours but that the relevance of perceived distance rapidly vanishes as this distance increases. Little systematic evidence emerges that individuals take climate impacts into account when these impacts are not anticipated to produce personal consequences. Some implications for the promotion of pro-environmental behaviour relying on "proximising" climate change impacts are discussed.

Keywords: Climate change; Psychological distance; Discounting; Pro-environmental behaviour; UK.
Journal of Economic Literature Classification: D15; D91; Q54

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1 Introduction

Much like anonymously donating an organ to a stranger, actively reducing one's environmental footprint by investing time, money and effort into recycling, adopting sufficiency behaviours or buying energy-efficient appliances can be interpreted as a form of costly altruism (Daube and Ulph, 2016; Nolan and Schultz, 2013). This is particularly true for behavioural adaptations meant to reduce greenhouse gas emissions and so, ultimately, mitigate the effects of global warming. The reason is that the costs associated with these activities arise immediately, while due to the tiny impact of each single individual's behaviour on the climate trajectory, the huge stock-flow lags and the enormous built-in inertias of the climate system, benefits - if coming into effect at all - will not materialize for generations to come.[1] Moreover, climate simulations commonly suggest that there is considerable geographical variation in the severity of climate change impacts, with the most devastating consequences predicted for poor inhabitants of those regions of the world that currently emit the least greenhouse gases (Brooks et al., 2005; Füssel, 2010; Otto et al., 2017).

Together, the extensive timescales and the considerable inequalities in the spatial and social distribution of climate change consequences lead to a situation where the individuals whose current behaviour is most harmful to the environment and the individuals who are likely to suffer the most from arising damages are separated by considerable distances in time, space and social hierarchy (Füssel, 2010; Otto et al., 2017). It is therefore little surprising that many people, particularly in Western countries, tend to perceive climate change as a distant problem without immediate relevance for themselves, while at the same time believing that it poses a major challenge for the world as a whole (Evans et al., 2014; Jones et al., 2017; Leiserowitz, 2006; Lorenzoni and Pidgeon, 2006; Scannell and Gifford, 2013; Singh et al., 2017).

While many contributions argue that this (perceived) gap between the self and the incidence of climate change impacts is an important barrier to engagement with climate change (Gifford, 2011; Kollmuss and Agyeman, 2002; Lorenzoni et al., 2007; Weber, 2010, 2016), experimental research has overwhelmingly failed to

[1] For instance, the IPCC report (Collins et al., 2013) presents a number of simulations showing that due to the long lifetime of most greenhouse gases, and the substantial inertia between their emission and the resulting change in temperature and precipitation patterns, global warming can be predicted to continue for centuries after greenhouse gas emissions have ceased.

influence individual willingness to tackle climate change by emphasising its proximal consequences (for a critical overview of studies focusing on spatial framing, see Brügger et al. (2016) and Brügger and Pidgeon (forthcoming), for an overview of studies assessing the effect of time delay, see Gattig and Hendrickx (2007)).

A natural question arising from this apparent discrepancy is thus to ask whether perceived distance of climate change impacts is actually relevant for determining engagement in mitigation behaviours. That is, whether individuals' behaviour effectively reflects their expectations about the timing and location of climate change damages, or whether these play a negligible role when making every-day decisions that affect their carbon footprint.[2] This is an important question, as the absence of such associations would indicate that proximal framing of climate change messages, however well-organized and adapted to the audience, would be unlikely to change individuals' behavioural patterns.

Yet, despite considerable scientific interest in the issue, there is surprisingly little research focusing on the effect of perceived psychological distance on actual pro-environmental behaviours - as opposed to beliefs, concerns and behavioural intentions. While both theoretical and empirical approaches suggest that the latter are important antecedents of pro-environmental behaviour (see, e.g., Armitage and Conner, 2001; Bamberg and Möser, 2007), it has likewise been documented that substantial discrepancies can arise between them. For example, many people do not follow through on their intentions (Bamberg and Möser, 2007; Kollmuss and Agyeman, 2002; Sheeran, 2002; Sheeran and Webb, 2016; Tam and Chan, 2017). It thus remains an open question in how far heterogeneity in expectations about the temporal, spatial and social distribution of climate change impacts actually translate into differences in efforts aimed at reducing one's carbon footprint (Moser et al., 2013; Reser et al., 2014).

The aim of the present study was therefore to explore these associations in a large, nationally representative survey from the United Kingdom. As the analysis is based on secondary data, this study focuses on the relationship between pro-environmental

[2] Psychological and economic research has identified a number of reasons why people would ignore environmental concerns in every-day decision making, including a lack of (actionable) knowledge, concerns for free-riding behaviour of others, or habitual decision-making (for comprehensive reviews of barriers explaining the gap between environmental concern and action, see, among others, Gifford (2011) and Lorenzoni et al. (2007)).

behaviour and perceived temporal and spatial distance of climate change impacts, as well as their interactions.

1.1 Perceived distance of climate change and discounting

Due to the long temporal delays and large inequalities of climate change consequences, decisions on mitigation efforts usually involve a trade-off between costs and benefits that arise at different points in time and space, and that potentially affect other individuals. A common framework for describing decisions that require individuals to weigh immediate efforts against expected distant consequences is the discounting paradigm (Frederick et al., 2002; Rachlin, 2006). In its most general form it describes how the value of an outcome changes as the distance from it increases (Rachlin, 2006). However, it is commonly applied assuming that events whose outcomes are perceived to be less certain, believed to occur further away in space and time or to overwhelmingly affect individuals that are considered different from one self, are commonly experienced as less attractive or threatening, and therefore elicit weaker responses (Frederick et al., 2002; Rachlin, 2006; Trope and Liberman, 2010). That is, most individuals would prefer a situation where they receive a reward here and now, over a situation where someone else, living far away, is more or less likely to receive this reward at some future point in time. Conversely, most people prefer that this other person suffers the negative consequences of an event whose incidence is uncertain, rather than having to immediately bear these consequences themselves.

While discounting processes have been first described and modeled in the context of intertemporal choice, i.e., for decisions involving trade-offs between costs and benefits occurring at different times (see, Frederick et al., 2002), the same concept has likewise been applied to describe changes in valuation across dimensions other than temporal delay (Rachlin, 2006). For instance, Hannon (1994) shows that commonly applied discount functions provide a good description of how opposition to the placement of power plants changes with geographical distance from the proposed site, or how positive (e.g., convenience) and negative (e.g., noise) features of a large shopping centre affect property values with increasing distance from it. Perrings and Hannon (2001) model this form of "spatial discounting" as a function of the

physical diffusion of external effects, and consequently the decreasing risk of being affected by them. Simon (1995) models variations in altruistic behaviour, i.e. in the interpersonal allocation of consumption, as a function of the perceived (emotional) distance from affected others, explicitly assuming that interpersonal choice is an analogue to intertemporal choice. This approach has informed a rich literature dealing with "social discounting" processes in altruistic behaviour, i.e. the way in which (perceived) social distance affects generosity and contributions to public goods (Jones and Rachlin, 2009; Rachlin and Jones, 2008; Vekaria et al., 2017). It has found that discounting along this social dimension tends to take the same hyperbolic form that has been identified for temporal discounting.

One reason why different distance dimensions appear to elicit similar discounting processes is that they could be driven by similar mental representations. This is the essence of Construal-level theory (CLT), which proposes that events that are removed from immediate experience are made salient by forming mental models (Trope and Liberman, 2003, 2010; Trope et al., 2007). These construals allow to traverse the distance between the self and the removed event and thus permit to make decisions taking account of future states, other individuals or the uncertainty of outcomes. CLT distinguishes four main dimensions of distance: *temporal*, i.e., the delay between the incidence of an event and one's current point in time, *spatial* implying the geographical distance between the incidence of an event and one's current position in space, *social* which accounts for the perceived similarities between those affected by an event and one-self, and *uncertainty*, which refers to the likelihood of the incidence of an event (Trope and Liberman, 2010; Trope et al., 2007). Importantly, these dimensions form different, yet related (e.g., Spence et al., 2012; Wakslak, 2012), features of a common underlying construct labelled "psychological distance", which describes the individuals impression of how close an event is to the self. As psychological distance increases, mental representation of events changes from concrete, detailed and contextualized terms to more abstract, simple and decontextualized models. Changes in different distance dimensions induce similar changes in mental representation, and are therefore treated in a symmetrical way (Trope and Liberman, 2010; Trope et al., 2007).

1.2 Judgemental discounting of climate change consequences

Contrary to expectations based on the apparent generality of CLT and the discounting paradigm, studies empirically investigating judgemental discounting of climate change consequences have unearthed a number of intricate, complex and partially conflicting findings on the relationship between dimensions of perceived distance, risk perception and engagement intentions. For instance, survey research on risk perception has generally found that climate change damages are perceived to be more probable and worrying with increasing spatial and social distance (Gifford et al., 2009; Spence et al., 2012), while increasing temporal distance and uncertainty over the issue seem to be related with decreasing risk perception and concern (Spence et al., 2012). Similarly, willingness to reduce energy consumption was found to be higher among respondents perceiving climate change consequences to be temporally close and comparatively certain, but assuming that it largely affected distant places and individuals different from the respondent (Spence et al., 2012).

While, one reason for finding apparently negative discount rates over space and social distance could be related to the fact that (perceived) severity of damages tends to be greater in distant places (Gifford, 2011; Gifford et al., 2009), experimental research has likewise found limited evidence for the relevance of psychological distance in determining concern or intention to act.

For instance, experiments comparing the effects of varying spatial focuses of climate change consequences on motivation to act have produced conflicting findings, with a majority of studies finding no or little differences in willingness to tackle climate change between individuals receiving information about spatially proximal and distal effects of global warming (see, Brügger et al. (2016) and Brügger and Pidgeon (forthcoming) for critical overviews of the literature). Based on a set of semi-structured interviews following such an experimental set-up, Brügger and Pidgeon (forthcoming) argue that one reason for the lack of observable effects of spatial framing is that individuals ignore or mentally adjust unexpected spatial information, and thereby reduce the effectiveness of such forms of interventions. Moreover, a recent study by Jones et al. (2017) finds that simultaneously manipulating all four dimensions of psychological distance tends to affect environmental concern

and mitigation intentions by influencing social distance and uncertainty rather than temporal or spatial perception of climate change impacts.

Similar results have been found in studies explicitly assessing temporal discounting in the context of global warming. These studies commonly present subjects with a number of predicted consequences, and then ask respondents to judge the severity of these events if occurring at different points in the future. A remarkable and oft-cited finding from this literature is that this form of delay manipulation seems to have little to no effect on judgements, suggesting that discounting environmental risks may be very weak. For instance, Nicolaij and Hendrickx (2003) found that for about half of their subjects risk perceptions and willingness to change relevant behaviours did not vary with outcome delay. Similarly, Sundblad et al. (2011) found that the degree of worry, the perceived severity and probability of damage, and intention to reduce CO2 emissions did not depend on manipulating the temporal delay of a number of negative consequences of global warming. These findings have lead some researchers to conclude that there may be considerable differences in discounting behaviour across domains, with "substantial fraction of nondiscounters and the absence of experimental delay effects" being typical for the environmental domain (Gattig and Hendrickx, 2007, p. 30). However, in how far these differences arise due to domain-specificities or due differences in elicitation methods and delay length is still a question of debate (Berry et al., 2017; Chapman, 2001; Hardisty and Weber, 2009; Richards and Green, 2015). In particular, the hyperbolic discounting theorem (Kirby and Herrnstein, 1995; Laibson, 1997) holds that discount rates decline as an event shifts further away into the future (see, Chapman, 2001, for an empirical example). As a consequence the considerable differences in delay lengths between financial (often less than one year) and environmental experiments (usually at least several decades) can be expected to yield differences in estimated discount rates.[3] Recent research on long-term financial discounting similarly finds that income from housing property arising hundreds of years in the future is discounted at rates substantially

[3] For an overview of the experimental literature on financial discounting, see, Frederick et al. (2002). Hardisty and Weber (2009) show that another reason for finding domain-specific discount rates is related to the fact that financial discounting is often derived from gains while environmental discounting is usually related to environmental degradation or pollution and thus refers to losses.

below the ones commonly identified in experimental discounting studies (Giglio et al., 2015).

1.3 Psychological distance and mitigation efforts

Research evaluating the effect of psychological distance on actual decisions or behavioural measures is scarce: A fact, that has repeatedly been highlighted as one of the main limitations in this line of research (McDonald et al., 2015; Moser et al., 2013; Reser et al., 2014). To the best of my knowledge, only two studies have investigated this issue, albeit implicitly. Pahl et al. (2005) analyse determinants of self-reported pro-environmental behaviour in a sample of 90 British students. They find that while individuals rate the personal chances of being affected by an array of 22 environmental hazards as lower as that of otherwise comparable individuals, this difference in risk perception does not translate into differences in pro-environmental behaviour. Reser et al. (2012) using a large balanced sample of the Australian population, find that individuals who believe to have directly or indirectly been affected by climate change tend to be more likely to execute a number of behaviours aimed to reduce their carbon footprint, such as driving less or recycling.

The present research extends these findings by investigating the association between perceived temporal and spatial distance to climate change impacts and self-reported pro-environmental behaviours in a large, representative sample from the United Kingdom. Specifically, it draws on the British Household Panel Survey (BHPS), which contains comprehensive information on the socio-demographic and psychological profiles of respondents. Using this data, I am thus able to control for a wide range of potentially co-founding factors and thus address some of the concerns raised in the context of discounting studies (e.g., by Pahl et al., 2014). Results suggest that differences in perceptions are well-reflected in differences in self-reported pro-environmental behaviours, with the prior being relevant predictors for the latter.

2 Data and descriptives

This study uses data from the BHPS (University of Essex. Institute for Social and Economic Research, 2010), a longitudinal survey of individuals and their families living in the United Kingdom (for detailed information, see Taylor et al., 2010). Data is collected annually from all members of sample households, aged 16 or older. I rely primarily on the 2008 wave (wave r) of the data set, which includes a set of items constructed to evaluate the respondent's environmental concerns and behaviours. The data set as well as its successor have been used in previous studies linking individual traits with environmentally relevant behaviour (e.g., Busic-Sontic et al., 2017; Lange et al., 2014; Volland, 2017). This research has likewise demonstrated that the environmental behaviours considered in this contribution have a substantial effect on residential energy demand of households.

The initial data set contains information from 11,902 individual respondents. Of these 2,678 provided incomplete or inconsistent information and were therefore removed before the analysis. These removals encompass 1,239 respondents who reported that they could not execute one or more of the environmentally relevant behaviours that are used to construct the dependent variables in this analysis (see section 2.1), or that they did not know how often they executed it.[4] A further 1,051 individuals were dropped from the sample due to non-response on items measuring expectations about the timing and location of climate change consequences (see section 2.1). Finally information from 388 respondents was not used due to inconsistencies in answering these items (for instance, when simultaneously reporting that they expected that climate change would affect the UK within the next 30 years, and that the UK would not be affected by climate change within the next 200 years). Results using all available information and ignoring inconsistent answering patterns are very similar to ones presented below (They are given in Table A3 in the Appendix). However, as such response patterns are likely to indicate misinterpreting

[4] For at least two reasons, excluding these observations from the analysis seems prudent. For one, it is not generally clear why respondents are unable to engage in an activity or don't know the frequency of doing so, such that assigning a frequency value would require substantial guesswork on the side of the author. Second, individuals who face external constraints that effectively prohibit them from executing a certain behaviour are of limited interest to this study as the environmental impact of their behaviour and their perceived climate change consequences are independent for reasons outside their personal control.

or misreporting, it seems advisable to exclude these observations from the analysis. Results below are, thus, based on information provided by 9,224 individuals.

2.1 Variable description

Dependent variables

The dependent variables in this analysis are derived from a set of eight items assessing the frequency by which respondents report to execute a number of energy-saving and waste-reducing actions, such as switching off lights in empty rooms, letting the tap water run while brushing teeth or buying locally produced food. Each of these items measures behavioural frequency on a five-point ordinal scale, ranging from never (1) to always (5). Table 1 presents the distribution of frequencies for each item, in the final sample. Across the board, individuals report relatively benign patterns of pro-environmental behaviours, with energy-saving efforts being considerably more pronounced than waste-avoidance. A vast majority of individuals (81.6%), for instance, report to always or very often switch of lights in empty rooms, and 51.8% of respondents claim to always or very often put on more cloth instead of turning up the heating. In contrast, 76.9% of respondents have never or at least not very often decided against buying a product because of excess packaging, and only 5.7% and 7.6% always buy locally produced food and recycled paper products, respectively.

INCLUDE TABLE 1 ABOUT HERE

In order to facilitate the presentation of regression results, information from individual items was combined into two scales of pro-environmental behaviour based on the general domain. One scale combines four items associated with energy-saving (i.e., those given in columns (1) to (4) of Table 1) and the other includes the remaining four items referring to waste-avoidance behaviours (given in columns (5) to (8) of Table 1). Scales are computed by standardizing the sum of reported frequency values constituting each scale. A preceding principal component analysis on all eight items yielded two components with an eigenvalue greater than unity thus supporting the assumption of two basic elements underlying responses to all

eight items from the environmental behaviour inventory. Loadings, however, were not entirely in line with the distinction between energy-related and waste-related behaviours introduced here. I nevertheless retained this distinction in order to preserve the intuitive interpretation of the two scales. Estimations based on predicted scores from the principal component analysis yield essentially identical conclusions about the role of perceived temporal and geographic distributions of climate change consequences on environmental behaviour. They are given in Table A3 in the Appendix. Descriptive statistics for the combined measures on pro-environmental effort in both domains are given in Table A2 in the Appendix.

Variables of interest

The main variables of interest in this study refer to the respondent's perception on the temporal and geographic distribution of climate change consequences. They are derived from of a short 6-item inventory on environmental concern asking respondents whether they agreed to a given statement. Two questions asked for the respondent's perception on the time frame in which the UK would be affected by climate change. Therefore respondents stated whether or not they believed that the people in the UK would be affected by climate change within the next (a) 30 years, and (b) 200 years. Answers for the final sample are displayed in Table 2. They show that more than 82% of respondents believed that UK residents would be affected by climate change within the next 30 years and another 11% expected effects to take place within the coming 200 years. That is, just about 7% of respondents did expect that climate change would not cause any noticeable effect for Brits until the year 2208. These results are similar to findings by Spence et al. (2012), who use UK data from an unrelated survey collected in 2010. They likewise find that about 70% of respondents believed that the UK would be affected by climate change within the next 25 years, while less than 5% of respondents reported that they did not believe that Britain would ever feel its effects.

Expectations on the geographical distribution of climate change consequences were assessed for two different types of risks, namely extensive, long-lasting flooding and severe food shortages. For each risk, respondents were asked whether they believed that climate change was likely to cause this effect in other parts of the

world and in the UK, respectively. Results from Table 2 show that about 75% of respondents believed that climate change was likely to cause flooding in other parts of the world, while a slightly larger proportion expected floods as a consequence of climate change in the UK. One reason for these comparatively high risk perception with respect to inundations in the UK could be due to a series of related extreme weather events including heavy rains and severe flooding taking place in parts of Northern Ireland, Eastern Scotland and central England in August 2008 (Met Office, 2011). Simple χ^2 tests indeed suggest that individuals interviewed after August are significantly more likely to believe that floods ($p < 0.002$), but not famine ($p < 0.199$) will affect the UK as a consequence of climate change. Since a vast majority of the BHPS interviews were conducted in the final third of the year, answers to the flood item may at least partially reflect these preceding events. It is important to note, however, that the qualitative finding, namely that there seems to be little perceived geographical distance of climate change consequences, again closely resembles results presented by Spence et al. (2012). Notably, this pattern does not extend to expectations concerning the geographical distribution of severe food shortages. In this case roughly four-fifths of respondents expected that climate change would produce such an effect in other parts of the world, while only about one third expected such consequences for the UK.

INCLUDE TABLE 2 ABOUT HERE

In line with predictions from CLT, answers across distance dimensions are closely related. For instance, about 87% of those assuming that the UK will be affected by climate change within the next 30 years also believe that floods are a likely consequence for the UK. Conversely, almost none of the individuals reporting that they do not believe that climate change will affect people in the UK within the next 200 years, report to expect either flood or famine as a CC risk for the UK. Tetrachoric correlations for the items measuring proximal consequences are highly statistically significant ($p < 0.001$) and exceed 0.58 for all combinations.

Since this study is interested in assessing how variations in pro-environmental effort relate to differences in perceived psychological distance of climate change

consequences, above variables were re-coded to better capture such differences in perception.

Therefore, for each of the three distribution measures used in this study - i.e., temporal delay, as well as geographic distance of flood and famine, respectively - a variable was created identifying respondents who believed that climate change will in general produce this effect. Thus, for temporal distance the variable takes a value of one for all individuals who believe that climate change will affect the UK independent of the timing of this effect, and zero otherwise. Likewise for geographical distance with respect to famine or floods, the corresponding variables take a value of one if the respondent believes that climate change causes severe food shortages or inundations, independent of the location, and zero otherwise. To reflect the fact that some of these respondents not only believe that climate change produces certain consequences in general, but also that these consequences will come into effect temporally or geographically close to them, a second set of dichotomous variables is created, identifying this sub-sample of respondents. That is, for temporal delay this variable takes a value of one for all respondents who believe that the UK will be affected within the next 30 years and zero otherwise. For geographical distance, these variables take a value of one if the respondent considers it likely that the corresponding effect will be felt in the UK. In other words, the first set of variables identifies the sub-sample of respondents that believe that a certain effect will come about as a consequence of climate change, while the second set of variables identifies the part of these sub-samples who additionally believe that this detrimental effect will occur close to them. As will be demonstrated in section 3, this construction allows for a straightforward test of discounting in the context of a linear regression model.

Further controls

Aside from providing information on individual perceptions on the temporal and geographical distribution of climate change consequences, the BHPS data set contains a rich set of additional variables that allow to capture some of the socio-demographic, psychological and family-related differences across respondents. In order to isolate

the effect of expectations from that of other, potentially correlated, characteristics, the ensuing analyses make use of this additional source of information.

In particular, socio-demographic controls include respondents' gender, age, race (4 dummy variables), and whether they were born in the UK. Moreover, they encompass their level of education (10 dummy variables), current marital status (4 dummies), current occupational status (4 dummies) and average weekly working hours. These latter controls account for the fact that pro-environmental effort has been found to increase with discretionary time (Chai et al., 2015).

Family-related control variables include the number of dependent children in five age groups, the number of household members aged 75 years or older, the type of household (9 dummies), the tenure of the family's home (3 dummies) and whether the household owned a car. Moreover, contingent on the dependent variable, this set includes a number of controls aiming to capture structural differences between households, which may affect the ease and willingness of household members to execute pro-environmental activities. For energy-related behaviours these encompass household possession of 13 electronic appliances, ranging from mobile phones to tumble dryers, as well as the main type of fuel used for space and water heating. For waste avoidance behaviours, controls include a dummy measuring whether the local authority runs a recycling scheme. Additional dummy sets control for the geographic location of the household within the UK and the month in which the respondent was interviewed. These account for otherwise unobservable regional and temporal differences (e.g., in prices for electricity, water and food, or exposure to past weather events), which I cannot control for directly due data limitations.

To capture differences in values, preferences and knowledge across respondents, I draw on the preceding literature in behavioural economics and environmental psychology to derive a number of proxy measures. In detail, differences in time preferences in health and financial domains are captured using smoking status for the former (Barlow et al., 2016; Lawless et al., 2013) and participation in private pension funds for the latter (Clark et al., 2017; Gouskova et al., 2010). Moreover, I measure risk preferences using two items asking respondents to self-evaluate how much risk they are willing to take (a) generally and (b) with respect to trusting strangers (see, Volland, 2017). Higher values imply higher preferences for risk. Other-regarding preferences are measured using information on respondents' frequency of volunteer-

ing by (a) attending meetings of local groups and voluntary organizations, and (b) doing voluntary work. Higher values mean higher frequencies. To ensure that the association between the perceived closeness of climate change consequences and pro-environmental behaviour does not capture attachment to the current place of living (Pahl et al., 2005), I further add a set of controls intended to measure this emotional connection. These include the frequency of talking to neighbours and meeting other people, the importance the respondent attaches to having good friends (higher values imply higher importance), as well as the respondent's sense of belonging to the local community measured based on a set of eight items.[5] Lastly, pro-environmental values and knowledge is measured using information about whether respondents are active in an environmental organization.

A final set of controls aims to address issues of systematic over-reporting of pro-environmental behaviour among survey respondents (Kormos and Gifford, 2014). I therefore include information on the presence of a number of relevant others during the interview section in which these behaviours were asked, whether the interviewer was under the impression that this presence affected the respondent's answers, and how the interviewer rated the respondents cooperation in general. Descriptive statistics for the above variables are given in Table A2.

3 Modelling pro-environmental effort

To empirically identify the link between pro-environmental behaviour and the two dimensions of psychological distance of climate change, pro-environmental effort is modelled using the following system of seemingly unrelated regression equations (SUR):

$$y_{d,i} = \alpha_d + \beta_{1,d} CC_i + \beta_{2,d} CC_i^{close} + \sum_{j=1}^{k} \gamma_j X_{j,i} + \sum_{s_d=1}^{l_d} \delta_s Z_{s,d,i} + \varepsilon_{d,i} \qquad (1)$$

where $y_{d,i}$ is the pro-environmental effort exerted by individual i in domain $d = \{energy, waste\}$. Error terms, $\varepsilon_{energy,i}$ and $\varepsilon_{waste,i}$, are assumed to follow a joint

[5] Its construction using principal component analysis is discussed more extensively in (Volland, 2017).

bivariate normal distribution and to be correlated among members of the same household. X_i presents a vector of the k socio-demographic and psychological variables specified above which are identical in the both estimations. Structural differences in living conditions that may influence the willingness or possibility to engage in pro-environmental behaviours are captured by l_d domain-specific controls, $Z_{d,i}$.

The binary variables of interest, CC_i and CC_i^{close}, refer to the respondent's the perceived timing or location of climate change consequences. CC_i takes a value of one for those respondents who believe that climate change will in general produce a certain effect, while CC_i^{close} identifies the sub-sample of these respondents who perceive this effect to be temporally or geographically close to themselves. For example, all individuals who believe that climate change will affect the UK within the next 200 years - i.e., all who state that the UK will be affected in 200 years or in 30 years - will be characterized by $CC_i = 1$, whereas only those who believe that this effect will be noticeable within the next 30 years will also be characterized by $CC_i^{close} = 1$. Hence, CC_i^{close} presents an interaction term. The β_1 coefficients then give the difference in environmental behaviour between individuals who believe that climate change produces a certain effect in general and individuals who do not believe that climate change produces this effect, while the β_2 coefficients give the additional difference between individuals who believe that the climate change effect is temporally or geographically close to themselves and individuals who believe that this effect is distant. In this sense, tests against the Null hypotheses $H_0 : \beta_{2,d} = 0$ provide information on whether individuals who expect climate change consequences to occur close to themselves report significantly different energy-saving and waste-reduction efforts than individuals who expect climate change consequences to take place at greater temporal or geographical distances. Rejecting this Null would therefore suggest that closeness of perceived consequences matters for determining pro-environmental effort, and thus suggest the presence of significant discounting in the valuation of climate change consequences.

In a first step, model (1) is estimated separately for each measure of psychological distance. Combinations and interactions between temporal and geographical distance are evaluated in section 4.3.

4 Results

Table 3 presents the results from the SUR models. Each column gives the results from one such model, with coefficients on the energy-saving scale in the upper part and point estimates for the waste-avoidance scale in the lower part. In order to economize on space I have excluded coefficient estimates for all control variables. They are given in Table A1 in the Appendix to this paper. For each variable of interest, three sets of models were estimated. The first gives the results excluding all covariates, while the second and third trace the changes in the coefficient estimates when controlling for the respondents' socio-economic, psychological and behavioural characteristics. Schwarz-Bayesian information criteria provide evidence that including these covariates improves model fit for all variables of interest. The final row of each model gives the estimated correlation between error terms from the energy and the waste equation, $\rho(\hat{\varepsilon}_{energy}, \hat{\varepsilon}_{waste})$. Coefficients take a value of around 0.27 and are highly significant, justifying the use of the joint estimation procedure.

INCLUDE TABLE 3 ABOUT HERE

4.1 Perceived temporal distribution of climate change consequences

Results from the first three columns of Table 3 show that perceptions on the temporal distribution of climate change consequences matter for predicting individual differences in pro-environmental effort. For both domains, effort increases as individuals perceive climate change impacts to occur sooner. Coefficients suggest that mean differences between those believing that climate change will affect the UK within the next 200 years and the base group, expecting climate changes effects to occur only in the very long run ($>$ 200 years) or not at all, range between 0.06 (waste-avoidance) and 0.11 (energy-saving) standard deviations. Point estimates for waste-avoidance efforts are, however, not statistically significant at any conventionally accepted level of error. Individuals who believe that climate change consequences will already be felt in the UK within the next 30 years again show significantly higher efforts than those expecting the consequences only beyond that point (but within the next

200 years). Conditional on specifications, mean differences between these groups reach between 0.097 to 0.137 standard deviations for energy-saving behaviours and between 0.157 and 0.229 standard deviations for waste-avoidance efforts. By extension, this group of individuals also differs considerably from the base group of respondents. Differences in pro-environmental effort between these two groups, obtained by adding the OLS coefficients from the two variables measuring perceived temporal distance to climate change consequences, reach up to 0.25 standard deviations for energy-saving behaviour and up to 0.31 standard deviations in the case of waste-avoidance.[6]

To put these values into perspective, being active in an environmental organization is associated with increases in environmental effort in the range between 0.27 (energy-saving) and 0.54 (waste-avoidance) standard deviations ($p < 0.001$ in both estimations). Hence, differences in pro-environmental effort between those expecting climate change consequences to be temporally close (≤ 30 years) and those believing them to be very far (> 200 years) roughly correspond to the differences between those actively engaged in such organizations and the rest of the population. Similarly, compared to those with a basic vocational degree or a lower educational attainment, individuals holding a higher tertiary degree report about 0.3 standard deviations higher frequencies of pro-environmental behaviour in both domains ($p < 0.001$ in both estimations). This again roughly reflects differences across the observable perceived distance to climate change impacts.

4.2 Perceived spatial distribution of climate change consequences

Similar findings are obtained for the perceived spatial distribution of climate change consequences. For both hazards, floods (see, columns (4) to (6), Table 3) and famine (see, columns (7) to (9), Table 3), I find that individuals who believe that the UK will be affected by them, report higher pro-environmental effort than individuals who expect that these effects take place only in other countries. Mean differences between these groups are estimated to range from about 0.1 (energy-saving, floods) to 0.22 (waste-avoidance, famine) standard deviations. Additionally, those expecting climate

[6] Unsurprisingly, a set of ensuing Wald tests shows that these effects are significantly different from zero even after applying Bonferroni correction to account for multiple testing.

change to cause flood or famine in other countries again tend to exhibit higher efforts than those who report that they do not believe that flood or famine is a probable consequence of global warming at all. Mean differences between these two groups range between 0.05 (waste-avoidance, floods) and 0.25 (waste-avoidance, famine) standard deviations, with coefficients being unequivocally statistically significant only for famine.

Notably, when comparing coefficients of the distance measures across domains, I find no evidence for domain-specific associations for either temporal or spatial dimensions. That is coefficients of distance measures do not differ significantly between energy-saving and waste-avoidance estimations, with p-values exceeding 0.14 in any ex-post comparison relying on Wald tests.[7]

4.3 Mutual influences of distance dimensions

Results from the previous section show that when analysed in isolation both temporal and spatial dimensions of psychological distance are related to pro-environmental effort, with decreasing distance leading to larger efforts. Yet, due to the considerable interrelations between different distance dimensions - also evidenced in section 2.1 - it remains unclear in how far point estimates tend to reflect the association with the entire construct of psychological distance rather than the single dimension. To investigate this issue, I repeated the exercises from Table 3, simultaneously including measures for perceived temporal and spatial distance. Results using the full specification including all 93 controls are given in columns (1) and (2) of Table 4. Specifications differ only with respect to the measure of spatial distance, relying alternatively on floods and famine.

INCLUDE TABLE 4 ABOUT HERE

Compared to values from Table 3, point estimates for distance dimensions drop substantially when simultaneously controlling for both temporal and spatial distance. This indeed suggests that coefficients from Table 3 are overestimated and capture parts of the association between pro-environmental effort and other dimensions of

[7] The average p-value of the six tests reaches 0.45 ($medianp = 0.53$).

psychological distance, as well. This interpretation is corroborated by comparing Schwarz-Bayesian information criteria (BIC) between Tables, which indicate that including both temporal and spatial distance improves model fit marginally, at best.

Declines in coefficient size are most pronounced for individuals who believe climate change impacts to be relatively distal (i.e., to affect the UK in 30 to 200 years or to take place in other countries). None of the coefficients for this group remains statistically significant, although standard errors increase only slightly. That is, using this specification, I find no evidence that these individuals differ from the base group expecting climate changes effects to occur only in the very long run ($>$ 200 years) or not at all. On the other hand, individuals expecting proximal impacts of climate change in either temporal ($\leq$ 30 years) or spatial (in the UK) dimension are still found to exhibit significantly higher pro-environmental effort than this base group. Results from Table 4 therefore underscore the basic finding that individuals tend to behave as if they were discounting distant climate change impacts.

An interesting question in this respect is whether the effects of the different distance dimensions are independent or if there is evidence that discounting is amplified or attenuated when expecting climate change to be close in several distance dimensions simultaneously (McDonald et al., 2015). For instance, the notion that climate change causes famine at one's place of living may be much more distressing if one expects this effect to materialize within the next 30 years, than when expecting it to take place in several generations from now. To investigate this issue, model (1) was further extended including an interaction term between closeness indicators in the temporal and spatial dimensions. Results, using floods or famine respectively, are given in columns (3) and (4) of Table 4. Due to the large overlap in distance dimensions, using interactions introduces considerable multicollinearity, as evidenced by the substantial increases in standard errors of the base effects. As a consequence, estimated coefficients are weakly significant at best, particularly in the specification relying on floods as a spatially varying effect, and BIC values suggest decreasing model fit compared to specifications containing no interaction.

Results differ considerably depending on the type of risk associated with spatial distance. When considering the interaction time by flooding, coefficients of base terms decrease significantly relative to the additive specification while interaction terms are positive and comparatively large. That is, results from this specification

suggest that perceiving climate change to be simultaneously close in the temporal and spatial dimensions substantially increases pro-environmental efforts. In fact, the relatively small base effects imply that previously reported effects of spatial closeness of floods on behaviour seems to be overwhelmingly driven by those that expect this effect to also materialize relatively soon.

On the other hand, when using the interaction time by famine, base effects increase in size and interaction effects are negative, implying that simultaneously perceiving climate change to be close in both measured dimensions may actually lead to lower effort than implied by the base effects. Note, however, that this is largely an effect of underestimating effort among those perceiving climate change to be a temporally distant phenomenon, while at the same time believing that it will lead to severe food shortages in the UK. In the interaction model the effect for this group almost doubles compared to the additive one (at least for waste-avoidance, column (3)), while estimates for the remaining groups differ neither significantly nor substantially between the two models.[8] This primarily indicates that the prospect of famine affecting the UK population is a powerful motivation for engagement against climate change, independent of its timing.

4.4 Perceived closeness and expected personal consequences

While results from the preceding sections suggest that perceived distance of climate change matters for predicting inter-individual differences in pro-environmental behaviours, they also show that this association is robust only for those who perceive impacts to occur comparatively close ($\leq$ 30 years and/or affecting the UK). One plausible hypothesis for this finding is that those expecting climate change consequences to occur comparatively soon or close, are more likely to perceive these consequences as a threat to their personal well-being. In the context of global warming, there is

[8] For example, individuals expecting climate change to cause famine in the UK and believing that this effect is temporarily close report about 0.26 standard deviations higher effort than those expecting famine in other countries and believing that the UK would only be affected in be relatively distant future ($>$ 30 years). In the interaction model the mean difference between these groups amounts to 0.27 standard deviations.

some evidence showing that mitigation intentions are higher among individuals who are afraid of its consequences (e.g., van Zomeren et al., 2010).[9]

To understand whether considerations for personal consequences indeed explain some of the observed association between perceived distance and pro-environmental behaviour, I draw on previous studies showing that temporal discounting tends to increase with age, because increasing mortality risks reduce the chances that a postponed event is actually experienced (Chao et al., 2009; Falk et al., 2017). That is, older people may be less willing to tackle climate change, because they are unlikely to be affected personally, even if its consequences are expected within a relatively short period of time. Conversely, if perceived closeness affects mitigation behaviour independent of considerations for private consequences, there should be no effect of age on the association between perceived closeness and pro-environmental effort.

I estimate whether the association between pro-environmental effort and expecting climate change consequences to occur within the next 30 years changes systematically with age using an interaction approach. That is, I interact, age and age squared - which were both found to be significant predictors of pro-environmental effort in the preceding regressions (see, Table A1 in the Appendix) - with the dummy identifying those respondents who expect climate change to affect Britons within the coming 30 years.[10]

INCLUDE FIGURE 1 ABOUT HERE

Figure 1 plots the predicted evolution of effort in the two domains across the observable age range for those expecting climate change impacts to affect the UK in the next 30 years (solid line) and those expecting these effects sometime for the

[9] For a more nuanced view on the relationship fear and action intentions, see Brügger et al. (2016) and O'Neill and Nicholson-Cole (2009).

[10] The effect of age on the relationship between perceived distance and pro-environmental effort is, by theoretical considerations alone, limited to the temporal dimension. It is thus little surprising, that I find limited evidence for an effect of age on this relationship when investigating perceived spatial proximity for either floods or famine, in particular when controlling for perceived temporal distance. Inversely, controlling for the perceived spatial distance of either floods or famine (or interactions between each and age) in estimations interacting perceived temporal distance, yields results that are very similar the ones presented in Figure 1.

period between 30 and 200 years (dashed line).[11] Predictions are based on a set of estimations augmenting the partial specifications from section 4.1.

Results show that for both domains of pro-environmental behaviour, differences in efforts between the two groups decrease with increasing age, and eventually disappear in both statistical and substantial terms for individuals in the upper half of the age distribution. More precisely, differences in pro-environmental efforts drop from more than 0.2 standard deviations for those aged 20 to about 0.02 standard deviations among 90-year-olds in both domains. A set of ensuing Wald tests finds that both groups are statistically distinguishable until the age of about 55 years for energy-saving behaviour and until the age of 70 years in terms of waste-avoidance efforts.[12]

5 Discussion

The aim of this paper was to investigate the relationship between perceived distance of climate change impacts and pro-environmental behaviour, in an effort to understand to what extent these expectations are relevant when making decisions that affect one's carbon footprint. Unlike much of previous research, this study has been able to draw on a large and representative data set of the population in the United Kingdom, simultaneously consider two dimensions (temporal and spatial) and their interactions, and explore (some of) the reasons driving discounting behaviour.

5.1 Perceived closeness and pro-environmental behaviour

Consistent with previous results, it was found that individuals expecting climate change consequences to occur sooner, show higher efforts to reduce their carbon footprint (Jones et al., 2017; Spence et al., 2011). These differences are statistically significant and substantively important. However, they are not monotonic. While

[11] For reasons of clarity, I excluded the base category of respondents from these figures. Predicted values for this group would form a curve parallel to the dashed line, shifted downwards.

[12] Additionally controlling for perceived spatial distance of floods or famine has no effect on estimated age-related differences in the association perceived temporal distance and pro-environmental effort. However, due to the increase in standard errors, group differences become statistically insignificant from age of about 50 years for both domains of behaviour.

results clearly show that those believing that climate change will affect the UK in the coming 30 years show higher pro-environmental effort than the rest of the population, little systematic evidence surfaced that within the latter group differences in perceived temporal distance (more or less than 200 years) are associated with differences in pro-environmental effort. This suggests that - at least in terms of actual behaviour - individuals appear to heavily discount climate change impacts along the temporal dimension. Results are thus in line with more recent research on temporal discounting in the environmental domain (Hardisty and Weber, 2009; Richards and Green, 2015).

Subsequent analyses interacting age with perceived temporal proximity find that differences in pro-environmental effort between those expecting temporally proximal and distal consequences disappear in later life, indicating that consequences that are unlikely to be experienced personally are valued similarly, independent of whether they occur in 5, 50 or 500 years. Notably, this finding does not imply that discounting becomes stronger in old age. To the contrary, consistent with much of the previous literature (Otto and Kaiser, 2014; Wiernik et al., 2013), it is found that pro-environmental behaviour actually increases with age. This suggests that the perceived temporal distance may be a particularly important driver of behaviour among younger individuals, potentially due to the anticipation of personal consequences (van Zomeren et al., 2010). An important implication of this finding is, thus, that while highlighting impending consequences in climate change communication is unlikely to lead to a uniform response across the population, it holds the potential of promoting pro-environmental behaviour among younger individuals, a group that exhibits particularly little effort.[13]

In terms of spatial distance, results resemble the ones obtained for the temporal dimension. Individuals who believe that a specific consequence of climate change - floods or famine - will affect the UK exhibit significantly higher efforts to mitigate their environmental footprint than the rest of the population. However, individuals

[13] As a note of caution, it must be stressed that what I observe is the relationship between actual perceptions and pro-environmental behaviour. As such I can only assume that perceptions on the distance of climate change can be sustainably manipulated (for evidence on short-term effects see, e.g., Jones et al., 2017; Pahl and Bauer, 2013), despite the fact that individuals tend to mentally adjust or ignore information on (spatial) distance in common experiments (Brügger and Pidgeon, forthcoming).

believing that these consequences will only affect other countries do not appear to differ systematically from individuals who believe that climate change does not cause this effect at all. In this sense, geographic distance matters for predicting pro-environmental behaviour, but its effect seems to wear off rapidly as the perceived impact moves further away from the home. In other words, individuals seem to heavily discount climate change impacts along the spatial dimension, as well.

These results differ from most of the previous literature on the relationship between (perceived) geographic distance of climate change consequences and behavioural intentions and concern, that has commonly reported no (Brügger et al., 2016; Brügger and Pidgeon, forthcoming) or opposite effects of spatial distance (Spence et al., 2012). One potential reason for this difference is that particularly previous survey research has not explicitly listed consequences of climate change, such that respondents may have implicitly considered gradually worsening outcomes with increasing distance (Gifford, 2011; Gifford et al., 2009), or subsumed "local" impacts as a part of the "global" consequences (Pahl et al., 2014).

5.2 Après nous le déluge

One of the more worrying - but maybe little surprising - results from the analysis is that beyond the expectations of personal consequences, estimates provide little evidence for an effect of perceived distance on pro-environmental effort. This is particularly true along the spatial dimension, where results from section 4.3 show that the expectation that climate change causes floods or famine in countries outside the UK does not translate into measureable efforts to reduce one's carbon footprint. One reason for this finding could be that individuals feel powerless and overwhelmed in face of such devastating consequences. O'Neill and Nicholson-Cole (2009), for instance, report that many subjects of their qualitative study responded with strong feelings of helplessness and an increased perception of inability to take action against climate change when faced with images of starving children. However, individuals who anticipate identical consequences for the UK exhibit higher efforts, despite the fact that one should reasonably expect similar levels of perceived helplessness. Hence, although I cannot exclude that differences in expected severity of these consequences change systematically with spatial distance,

results suggest that choices over environmentally relevant behaviours are unlikely to be affected by considerations of distant individuals' well-being. That is, people indeed behave as if they did not care what happened when they're gone, especially if consequences are expected to be shouldered by unrelated others.

This finding entails important consequences for the design of environmental campaigns, as it suggests that appealing to altruistic motivations by highlighting the devastating consequences of climate change for others is unlikely to yield sustainable adaptations in pro-environmental behaviour, even if these consequences are as dire as famine. While this does not necessarily imply that environmental campaigns need to abstain from appealing to altruistic or moral motivations - both of which have been shown to be effective, particularly in situations where the activity is framed in terms of self-gratifying emotional rewards (Bolderdijk et al., 2013; Hartmann et al., 2017) - it indicates that simply highlighting the consequences of today's behaviour on distant others may create compassion, but little action (O'Neill and Nicholson-Cole, 2009).

5.3 Limitations

Although relying on representative survey data helps to address issues of external validity, their use comes at the cost of having no control over the operationalisation, and thus internal validity, of the important concepts used in this study.

First and foremost, as the BHPS was not explicitly constructed to evaluate the effect psychological distance, the construction of survey items was not informed by the underlying theories. For that reason, measures of perceived spatial and temporal distance that are used in this analysis, do not perfectly separate the different dimension of psychological distance emphasized by CLT. In particular, all items used for construction of the spatial distance perception ask respondents whether they think it *likely* that a specific event will happen within a given time or at a certain place, and thus tend to conflate spatial with hypothetical distance. That is, a respondent may dispute the proposition that "extensive and long-lasting flooding caused by climate change is likely to take place in the UK" because she does not believe it to be (sufficiently) likely or because she is certain that it will not take place. An interesting complement to the current research would therefore be to evaluate to what extent the negative relationship between pro-environmental effort and perceived

spatial distance identified here, can be explained by the perceived uncertainty of the impact. Similarly, items evaluating temporal distance implicitly include spatial distance by conditioning spatial impacts to the UK. Moreover, they ask for periods rather than points in time, making it impossible to judge what "within the next 200 years" precisely means for each survey respondent. Nevertheless, even in the absence of precise time measures, this set of questions has allowed to roughly distinguish individuals based on perceived proximity of climate change consequences for the UK.

A second shortcoming, which applies to many studies relying on measures of pro-environmental behaviours (Gatersleben et al., 2002; Moser and Kleinhückelkotten, 2017), is that the activities that are used to measure behaviour do not correspond to the activities that are most relevant for determining the respondents' carbon footprint (Stern, 2014). While the behaviours considered in this contribution have been found to exhibit a substantial effect on residential energy demand of respondents' households in the BHPS (Lange et al., 2014; Volland, 2017), further analyses using other forms of environmentally significant behaviours (e.g., commuting choices) are certainly in order to complement the existing evidence.

Finally, it needs to be stressed that the cross-sectional regression coefficients reported here correspond to conditional associations between variables, rather than being informative about causal effects in any strict sense. It is, for instance, impossible to exclude that respondents adapt their answers on items assessing perceived distance in a way that ex-post rationalises their behaviours. An interesting avenue for further research would therefore be to address issues for potential reverse causality in regressions by extending the present analysis using more advanced modelling approaches (e.g., IV-estimators) or drawing on the longitudinal structure of the survey.

6 Conclusions

The results of this study provide additional evidence on the relationship between the (perceived) distance of climate change impacts and pro-environmental behaviour, and thereby contribute to our understanding of discounting in the environmental

domain. They suggest that, while in general, expecting consequences to occur closer and sooner is associated with higher pro-environmental efforts, measureable effects are largely confined to the individual's immediate proximity. That is, those expecting impacts to take place comparatively soon or close show substantially higher efforts than the rest of the population. In this latter group, however, further differences in perceived closeness do not translate into differences in pro-environmental effort. This behavioural pattern is consistent with standard discounting models, for which changes in valuations are largest close to the individual's here and now, and then level off as distance further increases (Rachlin, 2006).

A consequence of this pattern is that there is no distinguishable effect of expected distant climate change impacts on pro-environmental behaviour, suggesting that individuals indeed behave as if subscribing to the absolutistic notion of "après nous le déluge".

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Tables and Figures

Figure 1: Predicted environmental effort at different age levels

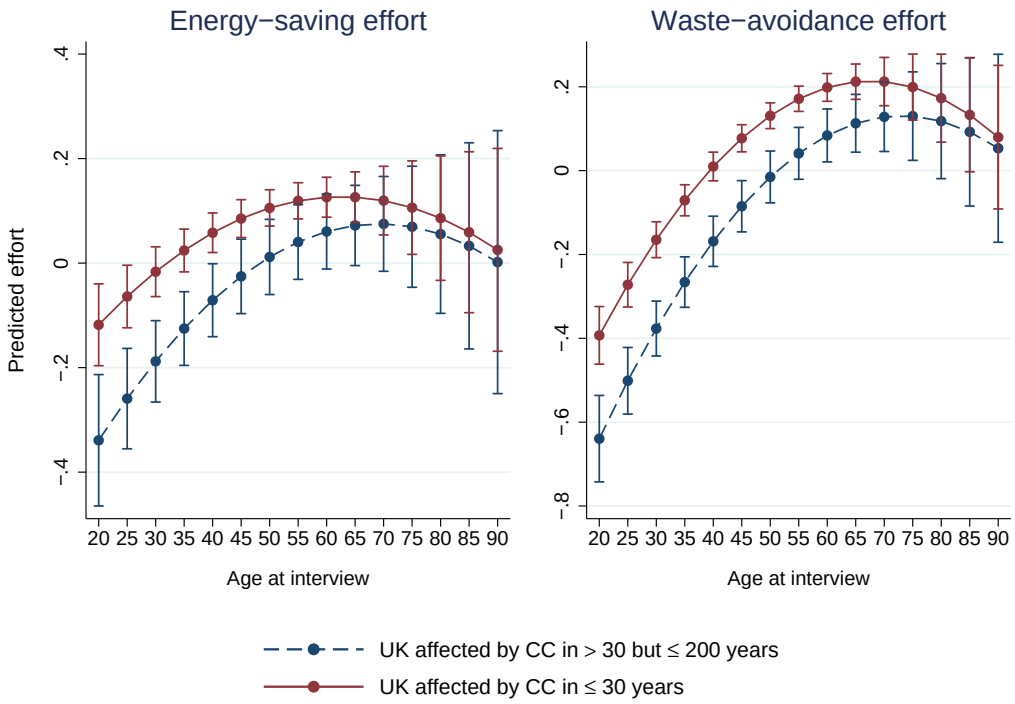

Table 1: Distribution of self-reported pro-environmental behaviours

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Energy-related behaviours				Waste-related behaviours			
	Leave your TV on standby for the night	Switch off lights in rooms that aren't being used	Keep the tap running while you brush your teeth	Put more clothes on when you feel cold rather than putting the heating on or turning it up	Decide not to buy something because you feel it has too much packaging	Buy food that has been produced locally	Buy recycled paper products such as toilet paper or tissues	Take your own shopping bag when shopping
Mean	3.568	1.730	2.851	2.585	4.086	3.102	3.314	2.597
(standard deviation)	(1.605)	(0.961)	(1.627)	(1.191)	(0.984)	(1.076)	(1.205)	(1.481)
Median	4	1	3	2	4	3	3	2
Percentage share of respondents answering:								
Always	20.91	53.56	33.94	20.67	1.42	5.67	7.55	33.78
Very often	9.07	28.00	13.65	31.14	7.12	26.24	20.53	20.60
Quite often	7.08	12.02	11.20	24.30	14.59	30.40	23.55	13.73
Not very often	18.21	4.74	15.80	16.81	35.18	27.60	29.75	15.93
Never	44.72	1.68	25.41	7.08	41.68	10.09	18.63	15.97

N = 9,224.

Table 2: Distribution of psychological distance of climate change consequences (in percentage)

Questionnaire item	Yes, I believe this	No, I don't believe this
People in the UK will be affected by climate change in the next 30 years.	82.40	17.60
People in the UK will be affected by climate change in the next 200 years.	93.26	6.74
Extensive and long-lasting flooding caused by climate change is likely to take place in low-lying countries like Bangladesh or the Netherlands.	74.75	25.25
Extensive and long-lasting flooding caused by climate change is likely to take place in the UK.	76.56	23.44
Climate change is likely to cause severe food shortages in places like Africa or India.	81.29	18.71
Climate change is likely to cause severe food shortages in the UK.	36.61	63.39

N = 9,224.

A Appendix

Table 3: Psychological distance and pro-environmental behaviour: SUR Results

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Dependent is energy-saving behaviours (standardized)									
UK affected by CC	0.1125**	0.1141**	0.1065**						
	(0.0538)	(0.0522)	(0.0528)						
UK affected in 30 years	0.1367***	0.0967***	0.1149***						
	(0.0343)	(0.0333)	(0.0341)						
CC causes floods				0.0798*	0.0579	0.0596			
				(0.0460)	(0.0449)	(0.0461)			
CC causes floods in UK				0.1391***	0.0975***	0.1077***			
				(0.0377)	(0.0371)	(0.0383)			
CC causes famine							0.1347***	0.0711**	0.0663**
							(0.0305)	(0.0300)	(0.0308)
CC causes famine in UK							0.1525***	0.1297***	0.1368***
							(0.0232)	(0.0231)	(0.0234)
Dependent is waste-reducing behaviours (standardized)									
UK affected by CC	0.0786	0.0585	0.0634						
	(0.0513)	(0.0436)	(0.0447)						
UK affected in 30 years	0.2281***	0.1569***	0.1568***						
	((0.0336)	(0.0286)	(0.0293)						
CC causes floods				0.1646***	0.0690*	0.0543			
				(0.0442)	(0.0404)	(0.0412)			
CC causes floods in UK				0.2052***	0.1385***	0.1543***			
				((0.0369)	(0.0343)	(0.0350)			
CC causes famine							0.2493***	0.0966***	0.0862***
							(0.0293)	(0.0261)	(0.0266)
CC causes famine in UK							0.2197***	0.1769***	0.1767***
							(0.0230)	(0.0210)	(0.0210)
Additional controls									
Socio-demographic	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Domain-specific	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Month and region	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Psychological	No	No	Yes	No	No	Yes	No	No	Yes
Observations	9,224	8,713	8,287	9,224	8,713	8,287	9,224	8,713	8,287
Log Lik	-25716	-25716	-22485	-25674	-22477	-21199	-25629	-22449	-21176
BIC	51515	51515	46557	51430	46543	44175	51340	46485	44129
$\rho(\hat{\varepsilon}_{energy}, \hat{\varepsilon}_{waste})$	0.2817***	0.2773***	0.2676***	0.2786***	0.2767***	0.2670***	0.2744***	0.2740***	0.2646***
	(0.0114)	(0.0118)	(0.0120)	(0.0114)	(0.0118)	(0.0120)	(0.0114)	(0.0118)	(0.0120)

Heteroskedasticity-robust standard errors clustered at the level of the household in parentheses.
*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table 4: Mutual influences of psychological distance on pro-environmental behaviour

	(1)	(2)	(3)	(4)
Dependent is energy-saving behaviours (standardized)				
UK affected by CC	0.0563	0.0844	0.0983	0.0827
	(0.0570)	(0.0555)	(0.0634)	(0.0565)
UK affected in 30 years	0.0800**	0.0730**	0.0131	0.0753**
	(0.0360)	(0.0356)	(0.0558)	(0.0384)
CC causes floods	0.0195		0.0259	
	(0.0486)		(0.0486)	
CC causes floods in UK	0.0808**		-0.0123	
	(0.0395)		(0.0688)	
CC causes famine		0.0122		0.0117
		(0.0349)		(0.0350)
CC causes famine in UK		0.1246***		0.1425
		(0.0237)		(0.1016)
UK affected in 30 years*CC causes floods in UK			0.1157	
			(0.0720)	
UK affected in 30 years*CC causes famine in UK				-0.0188
				(0.1036)
Dependent is waste-reducing behaviours (standardized)				
UK affected by CC	-0.0156	0.0211	0.0243	0.0056
	(0.0485)	(0.0468)	(0.0540)	(0.0475)
UK affected in 30 years	0.1016***	0.0954***	0.0380	0.1172***
	(0.0306)	(0.0302)	(0.0481)	(0.0318)
CC causes floods	0.0302		0.0364	
	(0.0432)		(0.0431)	
CC causes floods in UK	0.1281***		0.0396	
	(0.0361)		(0.0601)	
CC causes famine		0.0427		0.0388
		(0.0296)		(0.0296)
CC causes famine in UK		0.1636***		0.3273***
		(0.0214)		(0.0980)
UK affected in 30 years*CC causes floods in UK			0.1100*	
			(0.0626)	
UK affected in 30 years*CC causes famine in UK				-0.1714*
				(0.0994)
LL	-21190	-21165	-21188	-21163
BIC	44194	44144	44208	44158
$\rho(\hat{\varepsilon}_{energy}, \hat{\varepsilon}_{waste})$	0.2661***	0.2575***	0.2598***	0.2575***
	(0.0120)	(0.0112)	(0.0112)	(0.0112)

N = 8,287. Heteroskedasticity-robust standard errors clustered at the level of the household in parentheses. All estimations control for socio-economic and psychological variables, as well as regional and month dummies.

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table A1: Psychological distance and pro-environmental behaviour: Complete SUR Results.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Dependent is energy-saving behaviours (standardized)								
UK affected by CC	0.1125**	0.1141**	0.1065**						
	(0.0538)	(0.0522)	(0.0528)						
UK affected in 30 years	0.1367***	0.0967***	0.1149***						
	(0.0343)	(0.0333)	(0.0341)						
CC causes floods				0.0798*	0.0579	0.0596			
				(0.0460)	(0.0449)	(0.0461)			
CC causes floods in UK				0.1391***	0.0975***	0.1077***			
				(0.0377)	(0.0371)	(0.0383)			
CC causes famine							0.1347***	0.0711**	0.0663**
							(0.0305)	(0.0300)	(0.0308)
CC causes famine in UK							0.1525***	0.1297***	0.1368***
							(0.0232)	(0.0231)	(0.0234)
Risk attitude			0.0077			0.0080			0.0074
			(0.0061)			(0.0061)			(0.0061)
Trust propensity			-0.0052			-0.0053			-0.0054
			(0.0059)			(0.0059)			(0.0059)
Current smoker			-0.1548***			-0.1524***			-0.1544***
			(0.0293)			(0.0294)			(0.0293)
Paid into private pension fund			0.0111			0.0126			0.0122
			(0.0391)			(0.0392)			(0.0390)
Talks to neighbours (freq.)			0.0136			0.0141			0.0116
			(0.0128)			(0.0128)			(0.0128)
Meets people (freq.)			-0.0460***			-0.0456***			-0.0452***
			(0.0155)			(0.0155)			(0.0155)
Belongs to community (std.)			-0.0106			-0.0106			-0.0104
			(0.0072)			(0.0072)			(0.0071)
Importance of friends			0.0212**			0.0198**			0.0202**
			(0.0092)			(0.0092)			(0.0092)
Liberal family values (std.)			0.0311***			0.0306***			0.0295***
			(0.0097)			(0.0097)			(0.0097)
Reciprocity preferences			0.0017			0.0012			-0.0001
			(0.0110)			(0.0110)			(0.0109)
Attend meetings of voluntary organizations			0.0136			0.0141			0.0116
			(0.0128)			(0.0128)			(0.0128)
Doing voluntary work			-0.0460***			-0.0456***			-0.0452***
			(0.0155)			(0.0155)			(0.0155)

Table A1: Psychological distance and pro-environmental behaviour: Complete SUR Results.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Member of environmental organization			0.2678***			0.2661***			0.2702***
			(0.0651)			(0.0649)			(0.0646)
Household income (log)		-0.0599***	-0.0654***		-0.0581***	-0.0630***		-0.0539**	-0.0589***
		(0.0220)	(0.0229)		(0.0218)	(0.0226)		(0.0217)	(0.0225)
Male respondent		-0.0312	-0.0412*		-0.0351	-0.0463**		-0.0256	-0.0357
		(0.0217)	(0.0230)		(0.0217)	(0.0230)		(0.0217)	(0.0230)
Age		0.0204***	0.0182***		0.0197***	0.0173***		0.0198***	0.0176***
		(0.0051)	(0.0054)		(0.0051)	(0.0054)		(0.0051)	(0.0054)
Age squared		-0.0001***	-0.0001**		-0.0001**	-0.0001**		-0.0001***	-0.0001**
		(0.0001)	(0.0001)		(0.0001)	(0.0001)		(0.0001)	(0.0001)
Born in UK		-0.0972*	-0.0800		-0.1038*	-0.0861		-0.0969*	-0.0797
		(0.0555)	(0.0570)		(0.0555)	(0.0570)		(0.0555)	(0.0571)
Subjective health status		0.0149	0.0073		0.0148	0.0075		0.0163	0.0086
		(0.0129)	(0.0131)		(0.0129)	(0.0132)		(0.0128)	(0.0131)
Race (base: white)									
Black		-0.0979	-0.1531		-0.0839	-0.1377		-0.0996	-0.1496
		(0.1406)	(0.1509)		(0.1382)	(0.1480)		(0.1383)	(0.1487)
Asian		0.0099	-0.0249		0.0147	-0.0163		-0.0139	-0.0468
		(0.1117)	(0.1106)		(0.1091)	(0.1078)		(0.1117)	(0.1112)
Other		0.3253***	0.3383***		0.3278***	0.3397***		0.3149***	0.3267***
		(0.1155)	(0.1179)		(0.1151)	(0.1172)		(0.1163)	(0.1194)
Educational attainment (base: undefined qualification)									
None		0.0147	0.0550		0.0162	0.0559		0.0100	0.0479
		(0.1005)	(0.1081)		(0.1001)	(0.1074)		(0.0999)	(0.1077)
Elementary		-0.0172	-0.0110		-0.0128	-0.0061		-0.0228	-0.0191
		(0.1129)	(0.1209)		(0.1126)	(0.1204)		(0.1125)	(0.1208)
Basic vocational		0.0421	0.0725		0.0443	0.0737		0.0469	0.0746
		(0.1039)	(0.1114)		(0.1036)	(0.1107)		(0.1033)	(0.1110)
Middle general		0.0383	0.0679		0.0439	0.0723		0.0488	0.0768
		(0.1005)	(0.1086)		(0.1002)	(0.1080)		(0.0999)	(0.1083)
Middle vocational		0.0814	0.1163		0.0859	0.1200		0.0877	0.1210
		(0.1068)	(0.1139)		(0.1065)	(0.1133)		(0.1062)	(0.1136)
High general		0.1510	0.1603		0.1538	0.1620		0.1665	0.1717
		(0.1040)	(0.1125)		(0.1037)	(0.1118)		(0.1035)	(0.1122)
High vocational		0.1112	0.1238		0.1084	0.1187		0.1192	0.1289
		(0.1071)	(0.1149)		(0.1068)	(0.1143)		(0.1067)	(0.1147)
Lower tertiary		0.1695*	0.1752		0.1721*	0.1765		0.1823*	0.1866*
		(0.1004)	(0.1083)		(0.1000)	(0.1076)		(0.0998)	(0.1079)

Table A1: Psychological distance and pro-environmental behaviour: Complete SUR Results.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Higher tertiary		0.2953***	0.2877***		0.2954***	0.2862***		0.3105***	0.3023***
		(0.1016)	(0.1097)		(0.1012)	(0.1091)		(0.1010)	(0.1093)
Marital status (base: never married)									
Married or living as couple		0.0620	0.0561		0.0652	0.0599		0.0640	0.0559
		(0.0563)	(0.0576)		(0.0564)	(0.0578)		(0.0562)	(0.0577)
Divorced or separated		0.0934*	0.1162**		0.0949*	0.1168**		0.0938*	0.1146**
		(0.0551)	(0.0565)		(0.0552)	(0.0566)		(0.0552)	(0.0566)
Widowed		0.1297**	0.1062		0.1296**	0.1061		0.1322**	0.1065
		(0.0638)	(0.0653)		(0.0639)	(0.0655)		(0.0640)	(0.0655)
Occupational status (base: self-employed or in employment)									
Unemployed		-0.0844	-0.0803		-0.0803	-0.0753		-0.0847	-0.0824
		(0.0729)	(0.0766)		(0.0731)	(0.0768)		(0.0729)	(0.0767)
Retired		-0.0010	-0.0073		0.0034	-0.0019		-0.0063	-0.0127
		(0.0580)	(0.0588)		(0.0580)	(0.0588)		(0.0578)	(0.0585)
Maternity leave		0.0255	0.0399		0.0288	0.0440		0.0185	0.0288
		(0.0714)	(0.0730)		(0.0713)	(0.0729)		(0.0712)	(0.0726)
Other		0.0499	0.0400		0.0580	0.0488		0.0520	0.0414
		(0.0529)	(0.0547)		(0.0529)	(0.0546)		(0.0528)	(0.0546)
Weekly working hours		-0.0033***	-0.0033***		-0.0032***	-0.0031***		-0.0033***	-0.0033***
		(0.0011)	(0.0012)		(0.0011)	(0.0012)		(0.0011)	(0.0012)
Number of children in household									
Aged 0 to 2		-0.0517	-0.0520		-0.0531	-0.0525		-0.0503	-0.0502
		(0.0489)	(0.0499)		(0.0489)	(0.0499)		(0.0490)	(0.0502)
Aged 3 to 4		0.1148**	0.1102**		0.1164**	0.1115**		0.1107**	0.1059**
		(0.0497)	(0.0507)		(0.0495)	(0.0504)		(0.0496)	(0.0506)
Aged 5 to 11		-0.0223	-0.0297		-0.0229	-0.0300		-0.0210	-0.0273
		(0.0252)	(0.0256)		(0.0251)	(0.0255)		(0.0253)	(0.0257)
Aged 12 to 15		-0.0249	-0.0277		-0.0223	-0.0250		-0.0225	-0.0255
		(0.0342)	(0.0349)		(0.0340)	(0.0346)		(0.0341)	(0.0347)
Aged 16 to 18		-0.0552	-0.0578		-0.0571	-0.0598		-0.0560	-0.0585
		(0.0493)	(0.0515)		(0.0491)	(0.0513)		(0.0496)	(0.0521)
Household members over 75 years		0.0504	0.0513		0.0512	0.0521		0.0519	0.0530
		(0.0393)	(0.0392)		(0.0394)	(0.0393)		(0.0392)	(0.0392)
Household type (base: single non-elderly)									
Single elderly		-0.0426	-0.0478		-0.0489	-0.0557		-0.0499	-0.0563
		(0.0743)	(0.0757)		(0.0744)	(0.0758)		(0.0742)	(0.0756)
Couple, no children		-0.0239	-0.0465		-0.0284	-0.0531		-0.0291	-0.0522
		(0.0727)	(0.0743)		(0.0728)	(0.0743)		(0.0726)	(0.0742)

Table A1: Psychological distance and pro-environmental behaviour: Complete SUR Results.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Couple, dependent children		-0.0079	-0.0289		-0.0120	-0.0348		-0.0137	-0.0347
		(0.0812)	(0.0831)		(0.0813)	(0.0833)		(0.0812)	(0.0834)
Couple, non-dependent children		-0.0386	-0.0594		-0.0392	-0.0611		-0.0446	-0.0665
		(0.0690)	(0.0704)		(0.0690)	(0.0704)		(0.0689)	(0.0705)
Lone parent, dependent children		0.0544	0.0591		0.0514	0.0564		0.0448	0.0486
		(0.0769)	(0.0786)		(0.0769)	(0.0787)		(0.0767)	(0.0785)
Lone parent, non-dependent children		-0.0180	-0.0222		-0.0183	-0.0248		-0.0231	-0.0306
		(0.0726)	(0.0745)		(0.0725)	(0.0744)		(0.0725)	(0.0744)
2+ unrelated adults		0.0371	0.0371		0.0419	0.0373		0.0427	0.0319
		(0.1115)	(0.1233)		(0.1114)	(0.1238)		(0.1126)	(0.1256)
Other household		0.0889	0.0575		0.0788	0.0464		0.0764	0.0436
		(0.1129)	(0.1155)		(0.1135)	(0.1162)		(0.1148)	(0.1183)
Home tenure (base: owner)									
Renter		-0.0591*	-0.0244		-0.0595*	-0.0260		-0.0650*	-0.0303
		(0.0354)	(0.0365)		(0.0354)	(0.0365)		(0.0354)	(0.0365)
Rent free or other		-0.0644	-0.0998		-0.0635	-0.0983		-0.0652	-0.0986
		(0.0827)	(0.0871)		(0.0829)	(0.0872)		(0.0831)	(0.0882)
Household owns a car		0.0064	-0.0171		0.0043	-0.0199		0.0083	-0.0155
		(0.0384)	(0.0396)		(0.0383)	(0.0396)		(0.0383)	(0.0396)
Household appliances									
Cable TV		-0.1074***	-0.1019***		-0.1077***	-0.1026***		-0.1058***	-0.1007***
		(0.0329)	(0.0337)		(0.0329)	(0.0338)		(0.0328)	(0.0337)
Satellite dish		-0.1600***	-0.1564***		-0.1598***	-0.1562***		-0.1582***	-0.1544***
		(0.0249)	(0.0253)		(0.0249)	(0.0253)		(0.0249)	(0.0253)
Landline phone		-0.0178	-0.0567		-0.0169	-0.0543		-0.0152	-0.0539
		(0.0465)	(0.0478)		(0.0464)	(0.0477)		(0.0466)	(0.0479)
Mobile phone		0.0280	0.0217		0.0305	0.0250		0.0310	0.0253
		(0.0521)	(0.0536)		(0.0521)	(0.0536)		(0.0520)	(0.0534)
Colour TV		0.1592	0.2069		0.1642	0.2116		0.1603	0.2045
		(0.1468)	(0.1577)		(0.1461)	(0.1570)		(0.1455)	(0.1564)
VCR		-0.0195	-0.0197		-0.0181	-0.0175		-0.0164	-0.0151
		(0.0614)	(0.0640)		(0.0611)	(0.0635)		(0.0609)	(0.0634)
Freezer		-0.0014	0.0348		-0.0048	0.0296		-0.0022	0.0352
		(0.0680)	(0.0698)		(0.0677)	(0.0695)		(0.0680)	(0.0697)
Washing machine		-0.0043	-0.0371		-0.0043	-0.0357		-0.0079	-0.0399
		(0.0711)	(0.0741)		(0.0708)	(0.0738)		(0.0712)	(0.0744)
Tumble dryer		-0.1374***	-0.1281***		-0.1370***	-0.1278***		-0.1368***	-0.1281***
		(0.0255)	(0.0260)		(0.0255)	(0.0261)		(0.0255)	(0.0260)

Table A1: Psychological distance and pro-environmental behaviour: Complete SUR Results.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Dishwasher		-0.0880***	-0.0825***		-0.0871***	-0.0808***		-0.0858***	-0.0794***
		(0.0251)	(0.0256)		(0.0251)	(0.0256)		(0.0251)	(0.0256)
Microwave		-0.0706	-0.0637		-0.0725	-0.0668		-0.0733	-0.0680
		(0.0465)	(0.0478)		(0.0465)	(0.0478)		(0.0465)	(0.0477)
Home computer		-0.0249	-0.0295		-0.0258	-0.0306		-0.0237	-0.0284
		(0.0350)	(0.0355)		(0.0349)	(0.0354)		(0.0349)	(0.0354)
CD player		0.0296	0.0430		0.0283	0.0412		0.0263	0.0392
		(0.0344)	(0.0356)		(0.0343)	(0.0355)		(0.0344)	(0.0355)
Type of central heating system (base: none)									
Gas		-0.0017	-0.0251		-0.0016	-0.0240		-0.0035	-0.0278
		(0.0537)	(0.0548)		(0.0539)	(0.0550)		(0.0537)	(0.0548)
Oil		0.0175	-0.0205		0.0185	-0.0182		0.0145	-0.0243
		(0.0615)	(0.0625)		(0.0616)	(0.0627)		(0.0615)	(0.0625)
Electricity		0.0573	-0.0006		0.0559	-0.0006		0.0534	-0.0051
		(0.0693)	(0.0709)		(0.0693)	(0.0710)		(0.0692)	(0.0709)
Solid fuels or other		0.0554	0.0079		0.0538	0.0070		0.0491	0.0014
		(0.0936)	(0.0938)		(0.0937)	(0.0939)		(0.0935)	(0.0938)
Others present during interview		0.0073	0.0050		0.0066	0.0043		0.0043	0.0017
		(0.0291)	(0.0296)		(0.0292)	(0.0296)		(0.0292)	(0.0296)
Presence of others during value section of the interview									
Partner		-0.0269	-0.0184		-0.0262	-0.0175		-0.0253	-0.0167
		(0.0353)	(0.0359)		(0.0353)	(0.0360)		(0.0353)	(0.0359)
Other adult		-0.0888*	-0.0744		-0.0875	-0.0723		-0.0911*	-0.0753
		(0.0533)	(0.0552)		(0.0534)	(0.0553)		(0.0533)	(0.0552)
Child		-0.0723	-0.0523		-0.0709	-0.0511		-0.0696	-0.0512
		(0.0461)	(0.0468)		(0.0460)	(0.0467)		(0.0460)	(0.0467)
Interviewer supervisor		0.1223	0.1314		0.1341	0.1423		0.1441	0.1522
		(0.2106)	(0.2117)		(0.2110)	(0.2124)		(0.2118)	(0.2129)
Paycheck provided		0.0479	0.0517		0.0477	0.0513		0.0491	0.0531
		(0.0327)	(0.0331)		(0.0328)	(0.0331)		(0.0327)	(0.0330)
Interviewer perception of respondent's cooperation		-0.0211	-0.0323		-0.0197	-0.0307		-0.0199	-0.0311
		(0.0280)	(0.0287)		(0.0279)	(0.0286)		(0.0279)	(0.0286)
Geographic location (base: Inner London)									
Outer London		-0.0159	-0.0304		-0.0111	-0.0226		-0.0095	-0.0213
		(0.1274)	(0.1306)		(0.1274)	(0.1304)		(0.1282)	(0.1314)
Rest of South East		0.1164	0.0676		0.1206	0.0738		0.1189	0.0729
		(0.1121)	(0.1158)		(0.1120)	(0.1154)		(0.1131)	(0.1168)

Table A1: Psychological distance and pro-environmental behaviour: Complete SUR Results.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
South West		0.2007*	0.1714		0.2038*	0.1781		0.2053*	0.1779
		(0.1160)	(0.1201)		(0.1158)	(0.1197)		(0.1168)	(0.1209)
East Anglia		0.0927	0.0478		0.0922	0.0490		0.1042	0.0604
		(0.1292)	(0.1316)		(0.1293)	(0.1315)		(0.1298)	(0.1323)
East Midlands		0.0894	0.0478		0.0916	0.0527		0.0883	0.0497
		(0.1181)	(0.1216)		(0.1180)	(0.1213)		(0.1191)	(0.1226)
West Midlands Conurbation		0.0040	-0.0460		0.0108	-0.0358		0.0064	-0.0427
		(0.1326)	(0.1373)		(0.1319)	(0.1363)		(0.1330)	(0.1376)
Rest of West Midlands		-0.0950	-0.1161		-0.0929	-0.1127		-0.0939	-0.1149
		(0.1267)	(0.1299)		(0.1267)	(0.1295)		(0.1275)	(0.1308)
Greater Manchester		-0.0171	-0.0500		-0.0125	-0.0414		-0.0173	-0.0470
		(0.1320)	(0.1361)		(0.1320)	(0.1359)		(0.1330)	(0.1372)
Mereyside		-0.1094	-0.1716		-0.1054	-0.1651		-0.1125	-0.1703
		(0.1397)	(0.1413)		(0.1393)	(0.1404)		(0.1388)	(0.1407)
Rest of North West		-0.1635	-0.2037		-0.1625	-0.1987		-0.1625	-0.1987
		(0.1255)	(0.1295)		(0.1251)	(0.1289)		(0.1262)	(0.1303)
South Yorkshire		-0.0682	-0.0872		-0.0689	-0.0848		-0.0693	-0.0867
		(0.1362)	(0.1401)		(0.1361)	(0.1399)		(0.1366)	(0.1405)
West Yorkshire		-0.2130	-0.2339*		-0.2170	-0.2365*		-0.2085	-0.2272*
		(0.1330)	(0.1366)		(0.1327)	(0.1362)		(0.1337)	(0.1374)
South of Yorkshire, and Humberside		-0.1634	-0.1760		-0.1602	-0.1696		-0.1610	-0.1712
		(0.1359)	(0.1371)		(0.1358)	(0.1369)		(0.1364)	(0.1378)
Tyne and Wear		-0.2725*	-0.3004*		-0.2697*	-0.2935*		-0.2712*	-0.2955*
		(0.1497)	(0.1554)		(0.1501)	(0.1558)		(0.1516)	(0.1573)
Rest of North		-0.2068	-0.2470*		-0.2107	-0.2481*		-0.2161	-0.2558*
		(0.1355)	(0.1406)		(0.1350)	(0.1398)		(0.1359)	(0.1409)
Wales		-0.0146	-0.0456		-0.0128	-0.0404		-0.0159	-0.0431
		(0.1117)	(0.1155)		(0.1115)	(0.1151)		(0.1126)	(0.1164)
Scotland		-0.2161**	-0.2487**		-0.2149*	-0.2441**		-0.2159*	-0.2448**
		(0.1101)	(0.1139)		(0.1099)	(0.1134)		(0.1110)	(0.1148)
Northern Ireland		-0.2487**	-0.2662**		-0.2507**	-0.2654**		-0.2552**	-0.2684**
		(0.1147)	(0.1187)		(0.1145)	(0.1183)		(0.1156)	(0.1197)
Month of interview (base: January)									
February		-0.0030	0.1196		0.0095	0.1417		0.0172	0.1546
		(0.1952)	(0.2021)		(0.1970)	(0.2045)		(0.1977)	(0.2045)
March		0.2031	0.2184		0.2011	0.2152		0.2141	0.2334
		(0.1858)	(0.1916)		(0.1848)	(0.1909)		(0.1854)	(0.1919)
September		0.2622**	0.2851**		0.2639**	0.2874**		0.2622**	0.2873**
		(0.1179)	(0.1231)		(0.1173)	(0.1224)		(0.1165)	(0.1212)

Table A1: Psychological distance and pro-environmental behaviour: Complete SUR Results.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
October		0.2129*	0.2283*		0.2149*	0.2309*		0.2183*	0.2366*
		(0.1177)	(0.1228)		(0.1171)	(0.1222)		(0.1162)	(0.1209)
November		0.1583	0.1866		0.1592	0.1888		0.1594	0.1900
		(0.1195)	(0.1244)		(0.1188)	(0.1237)		(0.1179)	(0.1225)
December		0.1519	0.1926		0.1540	0.1949		0.1480	0.1884
		(0.1303)	(0.1352)		(0.1296)	(0.1346)		(0.1288)	(0.1333)
Constant	-0.2039***	-0.0736	0.1040	-0.1606***	-0.0198	0.1568	-0.1538***	-0.0569	0.1499
	(0.0444)	(0.3673)	(0.4173)	(0.0301)	(0.3645)	(0.4146)	(0.0271)	(0.3633)	(0.4132)
Dependent is waste reduction behaviors (standardized)									
UK affected by CC	0.0786	0.0585	0.0634						
	(0.0513)	(0.0436)	(0.0447)						
UK affected in 30 years	0.2281***	0.1569***	0.1568***						
	(0.0336)	(0.0286)	(0.0293)						
CC causes floods				0.1646***	0.0690*	0.0543			
				(0.0442)	(0.0404)	(0.0412)			
CC causes floods in UK				0.2052***	0.1385***	0.1543***			
				(0.0369)	(0.0343)	(0.0350)			
CC causes famine							0.2493***	0.0966***	0.0862***
							(0.0293)	(0.0261)	(0.0266)
CC causes famine in UK							0.2197***	0.1769***	0.1767***
							(0.0230)	(0.0210)	(0.0210)
Risk attitude			0.0185***			0.0189***			0.0182***
			(0.0054)			(0.0054)			(0.0054)
Trust propensity			0.0092*			0.0090*			0.0089*
			(0.0053)			(0.0053)			(0.0053)
Current smoker			-0.1364***			-0.1333***			-0.1360***
			(0.0254)			(0.0254)			(0.0253)
Paid into private pension fund			0.1011***			0.1028***			0.1025***
			(0.0357)			(0.0355)			(0.0354)
Talks to neighbours (freq.)			0.0449***			0.0455***			0.0422***
			(0.0116)			(0.0116)			(0.0115)
Meets people (freq.)			-0.0347***			-0.0341**			-0.0334**
			(0.0134)			(0.0133)			(0.0133)
Belongs to community (std.)			-0.0350***			-0.0350***			-0.0347***
			(0.0064)			(0.0064)			(0.0063)
Importance of friends			0.0244***			0.0223***			0.0228***
			(0.0081)			(0.0081)			(0.0081)

Table A1: Psychological distance and pro-environmental behaviour: Complete SUR Results.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Liberal family values (std.)			0.0220**			0.0220**			0.0206**
			(0.0087)			(0.0086)			(0.0086)
Reciprocity preferences			0.0211**			0.0204**			0.0185*
			(0.0098)			(0.0098)			(0.0098)
Attend meetings of voluntary organizations			0.0449***			0.0455***			0.0422***
			(0.0116)			(0.0116)			(0.0115)
Doing voluntary work			-0.0347***			-0.0341**			-0.0334**
			(0.0134)			(0.0133)			(0.0133)
Member of environmental organization			0.5403***			0.5378***			0.5429***
			(0.0647)			(0.0649)			(0.0645)
Household income (log)		0.0117	0.0065		0.0138	0.0094		0.0200	0.0151
		(0.0176)	(0.0181)		(0.0177)	(0.0183)		(0.0174)	(0.0180)
Male respondent		-0.3084***	-0.3286***		-0.3120***	-0.3333***		-0.2989***	-0.3195***
		(0.0191)	(0.0202)		(0.0190)	(0.0201)		(0.0192)	(0.0202)
Age		0.0428***	0.0369***		0.0419***	0.0359***		0.0421***	0.0362***
		(0.0044)	(0.0046)		(0.0044)	(0.0046)		(0.0044)	(0.0046)
Age squared		-0.0003***	-0.0003***		-0.0003***	-0.0003***		-0.0003***	-0.0003***
		(0.0000)	(0.0000)		(0.0000)	(0.0000)		(0.0000)	(0.0000)
Born in UK		-0.0447	-0.0115		-0.0534	-0.0183		-0.0441	-0.0098
		(0.0524)	(0.0537)		(0.0523)	(0.0536)		(0.0525)	(0.0542)
Subjective health status		0.0166	0.0002		0.0169	0.0009		0.0190	0.0024
		(0.0117)	(0.0121)		(0.0117)	(0.0121)		(0.0116)	(0.0120)
Race (base: white)									
Black		-0.3952***	-0.4461***		-0.3766***	-0.4266***		-0.3973***	-0.4419***
		(0.1445)	(0.1540)		(0.1460)	(0.1561)		(0.1484)	(0.1581)
Asian		-0.1656	-0.2284**		-0.1586	-0.2175**		-0.1975*	-0.2575**
		(0.1017)	(0.1049)		(0.1019)	(0.1056)		(0.1041)	(0.1080)
Other		0.0290	0.0761		0.0321	0.0785		0.0146	0.0615
		(0.1220)	(0.1285)		(0.1185)	(0.1243)		(0.1223)	(0.1289)
Educational attainment (base: undefined qualification)									
None		-0.0794	-0.0707		-0.0770	-0.0688		-0.0855	-0.0782
		(0.0894)	(0.0945)		(0.0883)	(0.0929)		(0.0879)	(0.0927)
Elementary		-0.1445	-0.1452		-0.1359	-0.1360		-0.1491	-0.1515
		(0.0989)	(0.1045)		(0.0983)	(0.1032)		(0.0980)	(0.1033)
Basic vocational		-0.0062	-0.0020		-0.0020	0.0010		0.0020	0.0036
		(0.0914)	(0.0966)		(0.0903)	(0.0949)		(0.0898)	(0.0946)
Middle general		-0.0326	-0.0421		-0.0253	-0.0362		-0.0182	-0.0292

Table A1: Psychological distance and pro-environmental behaviour: Complete SUR Results.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
		(0.0880)	(0.0938)		(0.0869)	(0.0920)		(0.0865)	(0.0918)
Middle vocational		-0.0104	-0.0212		-0.0052	-0.0168		-0.0023	-0.0142
		(0.0946)	(0.0997)		(0.0936)	(0.0982)		(0.0929)	(0.0977)
High general		0.1242	0.0880		0.1277	0.0905		0.1452	0.1036
		(0.0914)	(0.0974)		(0.0904)	(0.0958)		(0.0899)	(0.0956)
High vocational		0.0969	0.0673		0.0928	0.0612		0.1081	0.0757
		(0.0946)	(0.0996)		(0.0936)	(0.0980)		(0.0934)	(0.0981)
Lower tertiary		0.0894	0.0524		0.0921	0.0536		0.1064	0.0680
		(0.0887)	(0.0941)		(0.0876)	(0.0924)		(0.0871)	(0.0921)
Higher tertiary		0.3185***	0.2469***		0.3170***	0.2440***		0.3376***	0.2651***
		(0.0898)	(0.0952)		(0.0887)	(0.0935)		(0.0882)	(0.0933)
Marital status (base: never married)									
Married or living as couple		0.1204**	0.1606***		0.1257**	0.1662***		0.1243**	0.1614***
		(0.0498)	(0.0512)		(0.0500)	(0.0514)		(0.0497)	(0.0511)
Divorced or separated		0.0056	0.0358		0.0060	0.0350		0.0045	0.0323
		(0.0504)	(0.0507)		(0.0505)	(0.0508)		(0.0502)	(0.0505)
Widowed		0.0457	0.0951		0.0444	0.0938		0.0481	0.0944
		(0.0578)	(0.0595)		(0.0578)	(0.0595)		(0.0574)	(0.0590)
Occupational status (base: self-employed or in employment)									
Unemployed		-0.0675	-0.0391		-0.0611	-0.0327		-0.0675	-0.0420
		(0.0664)	(0.0697)		(0.0664)	(0.0697)		(0.0667)	(0.0700)
Retired		-0.0301	-0.0362		-0.0232	-0.0288		-0.0366	-0.0430
		(0.0495)	(0.0494)		(0.0493)	(0.0493)		(0.0491)	(0.0490)
Maternity leave		-0.0493	-0.0138		-0.0442	-0.0079		-0.0586	-0.0278
		(0.0665)	(0.0667)		(0.0663)	(0.0666)		(0.0665)	(0.0668)
Other		-0.0259	-0.0469		-0.0148	-0.0360		-0.0232	-0.0457
		(0.0450)	(0.0459)		(0.0448)	(0.0457)		(0.0448)	(0.0457)
Weekly working hours		-0.0030***	-0.0032***		-0.0028***	-0.0030***		-0.0029***	-0.0031***
		(0.0010)	(0.0010)		(0.0010)	(0.0010)		(0.0010)	(0.0010)
Number of children in household									
Aged 0 to 2		0.0517	0.0305		0.0500	0.0296		0.0536	0.0327
		(0.0461)	(0.0461)		(0.0462)	(0.0462)		(0.0460)	(0.0462)
Aged 3 to 4		0.1006**	0.0709		0.1035**	0.0730		0.0958**	0.0660
		(0.0447)	(0.0453)		(0.0445)	(0.0450)		(0.0446)	(0.0452)
Aged 5 to 11		-0.0183	-0.0345		-0.0185	-0.0345		-0.0158	-0.0307
		(0.0238)	(0.0240)		(0.0236)	(0.0238)		(0.0238)	(0.0240)
Aged 12 to 15		-0.0065	-0.0003		-0.0028	0.0035		-0.0028	0.0030
		(0.0324)	(0.0317)		(0.0323)	(0.0316)		(0.0324)	(0.0317)
Aged 16 to 18		0.0204	0.0294		0.0176	0.0273		0.0194	0.0292

Table A1: Psychological distance and pro-environmental behaviour: Complete SUR Results.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
		(0.0466)	(0.0468)		(0.0466)	(0.0467)		(0.0469)	(0.0473)
Household members over 75 years		0.0655*	0.0716*		0.0660*	0.0721*		0.0664*	0.0727**
		(0.0367)	(0.0368)		(0.0367)	(0.0369)		(0.0364)	(0.0366)
Household type (base : single non-elderly)									
Single elderly		0.0485	0.0105		0.0395	0.0009		0.0376	-0.0008
		(0.0658)	(0.0662)		(0.0658)	(0.0662)		(0.0653)	(0.0657)
Couple, no children		0.0875	0.0462		0.0782	0.0355		0.0778	0.0369
		(0.0657)	(0.0662)		(0.0658)	(0.0663)		(0.0654)	(0.0660)
Couple, dependent children		-0.0352	-0.0806		-0.0431	-0.0897		-0.0446	-0.0894
		(0.0736)	(0.0740)		(0.0736)	(0.0740)		(0.0734)	(0.0739)
Couple, non-dependent children		0.0032	-0.0343		0.0017	-0.0363		-0.0045	-0.0429
		(0.0620)	(0.0624)		(0.0621)	(0.0626)		(0.0618)	(0.0624)
Lone parent, dependent children		-0.0923	-0.0952		-0.0978	-0.0989		-0.1063	-0.1089
		(0.0720)	(0.0729)		(0.0719)	(0.0728)		(0.0717)	(0.0727)
Lone parent, non-dependent children		-0.0154	-0.0090		-0.0165	-0.0126		-0.0222	-0.0196
		(0.0627)	(0.0629)		(0.0627)	(0.0630)		(0.0624)	(0.0627)
2+ unrelated adults		0.0812	0.1494		0.0821	0.1455		0.0844	0.1395
		(0.0897)	(0.0980)		(0.0901)	(0.0990)		(0.0895)	(0.0991)
Other household		0.0656	0.0405		0.0499	0.0253		0.0471	0.0212
		(0.1066)	(0.1028)		(0.1073)	(0.1037)		(0.1083)	(0.1053)
Home tenure (base: owner)									
Renter		0.0030	0.0501		0.0035	0.0483		-0.0048	0.0420
		(0.0313)	(0.0321)		(0.0313)	(0.0321)		(0.0311)	(0.0320)
Rent free or other		0.0411	0.0230		0.0413	0.0236		0.0388	0.0233
		(0.0811)	(0.0877)		(0.0803)	(0.0863)		(0.0810)	(0.0879)
Household owns a car		0.0134	-0.0167		0.0101	-0.0197		0.0161	-0.0136
		(0.0343)	(0.0352)		(0.0341)	(0.0351)		(0.0341)	(0.0350)
Local recycling scheme		-0.0021	0.0024		-0.0082	-0.0048		-0.0060	-0.0029
		(0.0481)	(0.0477)		(0.0480)	(0.0476)		(0.0478)	(0.0474)
Others present during interview		-0.0187	-0.0180		-0.0191	-0.0182		-0.0222	-0.0216
		(0.0281)	(0.0283)		(0.0281)	(0.0283)		(0.0280)	(0.0282)
Presence of others during value section of the interview									
Partner		-0.1184***	-0.1024***		-0.1179***	-0.1018***		-0.1167***	-0.1004***
		(0.0330)	(0.0332)		(0.0330)	(0.0332)		(0.0329)	(0.0331)
Other adult		-0.1583***	-0.1240**		-0.1572***	-0.1230**		-0.1615***	-0.1259**
		(0.0483)	(0.0503)		(0.0483)	(0.0504)		(0.0482)	(0.0503)
Child		-0.0750*	-0.0549		-0.0729*	-0.0532		-0.0710*	-0.0531

Table A1: Psychological distance and pro-environmental behaviour: Complete SUR Results.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
		(0.0398)	(0.0404)		(0.0396)	(0.0402)		(0.0397)	(0.0404)
Interviewer supervisor		0.1277	0.1453		0.1381	0.1549		0.1528	0.1689
		(0.1483)	(0.1427)		(0.1478)	(0.1429)		(0.1458)	(0.1403)
Paycheck provided		0.0311	0.0416		0.0294	0.0401		0.0312	0.0420
		(0.0301)	(0.0300)		(0.0301)	(0.0300)		(0.0299)	(0.0298)
Interviewer perception of respondent's cooperation		0.0716***	0.0619**		0.0727***	0.0634**		0.0724***	0.0627**
		(0.0259)	(0.0262)		(0.0258)	(0.0261)		(0.0257)	(0.0262)
Geographic location (base: Inner London)									
Outer London		-0.3765***	-0.3465***		-0.3644***	-0.3326***		-0.3619***	-0.3308***
		(0.1204)	(0.1263)		(0.1198)	(0.1253)		(0.1189)	(0.1249)
Rest of South East		-0.1554	-0.1659		-0.1477	-0.1569		-0.1502	-0.1584
		(0.1116)	(0.1182)		(0.1112)	(0.1175)		(0.1102)	(0.1170)
South West		-0.1302	-0.1284		-0.1223	-0.1168		-0.1206	-0.1179
		(0.1160)	(0.1224)		(0.1157)	(0.1218)		(0.1147)	(0.1212)
East Anglia		-0.0615	-0.0675		-0.0625	-0.0662		-0.0467	-0.0524
		(0.1245)	(0.1291)		(0.1243)	(0.1285)		(0.1232)	(0.1280)
East Midlands		-0.2329*	-0.2294*		-0.2271*	-0.2218*		-0.2318**	-0.2261*
		(0.1190)	(0.1246)		(0.1186)	(0.1239)		(0.1176)	(0.1234)
West Midlands Conurbation		-0.1256	-0.1162		-0.1144	-0.1029		-0.1207	-0.1122
		(0.1291)	(0.1363)		(0.1286)	(0.1358)		(0.1279)	(0.1353)
Rest of West Midlands		-0.2882**	-0.2755**		-0.2816**	-0.2686**		-0.2832**	-0.2721**
		(0.1235)	(0.1299)		(0.1232)	(0.1293)		(0.1221)	(0.1287)
Greater Manchester		-0.2713**	-0.2786**		-0.2624**	-0.2656**		-0.2684**	-0.2729**
		(0.1253)	(0.1318)		(0.1251)	(0.1311)		(0.1238)	(0.1305)
Mereyside		-0.2919**	-0.3012**		-0.2840**	-0.2913**		-0.2933**	-0.2977**
		(0.1404)	(0.1460)		(0.1405)	(0.1456)		(0.1379)	(0.1442)
Rest of North West		-0.3055**	-0.3031**		-0.3013**	-0.2951**		-0.3016**	-0.2957**
		(0.1235)	(0.1294)		(0.1231)	(0.1288)		(0.1220)	(0.1281)
South Yorkshire		-0.4856***	-0.5360***		-0.4817***	-0.5298***		-0.4822***	-0.5322***
		(0.1433)	(0.1478)		(0.1430)	(0.1472)		(0.1416)	(0.1464)
West Yorkshire		-0.2643**	-0.2485*		-0.2675**	-0.2508*		-0.2565**	-0.2399*
		(0.1228)	(0.1288)		(0.1226)	(0.1282)		(0.1216)	(0.1276)
South of Yorkshire, and Humberside		-0.0603	-0.0975		-0.0532	-0.0879		-0.0545	-0.0905
		(0.1268)	(0.1312)		(0.1260)	(0.1301)		(0.1247)	(0.1292)
Tyne and Wear		-0.4051***	-0.3911***		-0.3957***	-0.3777***		-0.3979***	-0.3812***
		(0.1368)	(0.1434)		(0.1365)	(0.1427)		(0.1359)	(0.1425)
Rest of North		-0.4065***	-0.4364***		-0.4071***	-0.4344***		-0.4150***	-0.4451***
		(0.1269)	(0.1342)		(0.1267)	(0.1337)		(0.1256)	(0.1330)

Table A1: Psychological distance and pro-environmental behaviour: Complete SUR Results.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Wales		-0.2100*	-0.2252*		-0.2054*	-0.2179*		-0.2099*	-0.2218*
		(0.1107)	(0.1176)		(0.1103)	(0.1169)		(0.1093)	(0.1164)
Scotland		-0.1590	-0.1654		-0.1552	-0.1586		-0.1568	-0.1604
		(0.1104)	(0.1172)		(0.1100)	(0.1164)		(0.1090)	(0.1159)
Northern Ireland		0.7331***	0.7241***		0.7344***	0.7277***		0.7256***	0.7209***
		(0.1105)	(0.1175)		(0.1101)	(0.1168)		(0.1091)	(0.1163)
Month of interview (base: January)									
February		-0.2428	-0.0595		-0.2306	-0.0340		-0.2213	-0.0193
		(0.1970)	(0.1679)		(0.1940)	(0.1648)		(0.1918)	(0.1582)
March		0.0405	0.0960		0.0417	0.0956		0.0586	0.1178
		(0.1463)	(0.1648)		(0.1465)	(0.1654)		(0.1447)	(0.1639)
September		-0.1409	-0.1336		-0.1393	-0.1313		-0.1421	-0.1325
		(0.0960)	(0.1009)		(0.0960)	(0.1009)		(0.0932)	(0.0981)
October		-0.1325	-0.1314		-0.1306	-0.1287		-0.1265	-0.1224
		(0.0960)	(0.1009)		(0.0960)	(0.1009)		(0.0931)	(0.0981)
November		-0.1829*	-0.1778*		-0.1821*	-0.1754*		-0.1827*	-0.1752*
		(0.0979)	(0.1027)		(0.0978)	(0.1026)		(0.0950)	(0.0999)
December		-0.2365**	-0.2136*		-0.2324**	-0.2091*		-0.2414**	-0.2190**
		(0.1088)	(0.1135)		(0.1088)	(0.1134)		(0.1060)	(0.1105)
Constant	-0.2039***	-1.6698***	-1.7476***	-0.3223***	-1.6522***	-1.7217***	-0.3125***	-1.7159***	-1.7526***
	(0.0444)	(0.2935)	(0.3333)	(0.0281)	(0.2925)	(0.3316)	(0.0258)	(0.2901)	(0.3306)
Observations	9,224	9,224	8,713	9,224	8,713	8,287	9,224	8,713	8,287
Log Lik	-25716	-25716	-22485	-25674	-22477	-21199	-25629	-22449	-21176
BIC	51515	51515	46557	51430	46543	44175	51340	46485	44129
$\rho(\hat{\varepsilon}_{energy}, \hat{\varepsilon}_{waste})$	0.2817***	0.2773***	0.2676***	0.2786***	0.2767***	0.2670***	0.2744***	0.2740***	0.2646***
	(0.0114)	(0.0118)	(0.0120)	(0.0114)	(0.0118)	(0.0120)	(0.0114)	(0.0118)	(0.0120)

Heteroskedasticity-robust standard errors clustered at the level of the household in parentheses.
*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table A2: Summary statistics

Variable	(1) Mean	(2) SD	(3) Min	(4) Max
Dependent variables				
Energy-saving behaviours (std)	0.0136	1.001	-3.200	1.889
Waste reduction behaviours (std)	-0.0256	0.996	-2.135	2.756
Variables of interest				
UK affected by CC	0.933	0.251	0	1
UK affected in 30 years	0.824	0.381	0	1
CC causes floods	0.848	0.359	0	1
CC causes floods in UK	0.766	0.424	0	1
CC causes famine	0.828	0.377	0	1
CC causes famine in UK	0.366	0.482	0	1
Further psychological controls				
Risk attitude	5.534	2.159	1	10
Trust propensity	4.217	2.106	1	10
Current smoker	0.217	0.412	0	1
Paid into private pension fund	0.0877	0.283	0	1
Talks to neighbours (freq.)	3.984	1.026	1	5
Meets people (freq.)	4.296	0.769	1	5
Belongs to community (std.)	-0.0238	1.938	-9.536	7.575
Importance of friends	9.211	1.265	1	10
Reciprocity preferences	3.258	1.008	1	5
Attend meetings of voluntary organizations	1.886	1.530	1	5
Doing voluntary work	1.636	1.239	1	5
Liberal family values (std.)	-0.0238	1.237	-2.263	5.087
Member of environmental organization	0.0270	0.162	0	1
Others present during interview	0.326	0.509	0	4
Presence of others during value section of the interview				
Partner	0.189	0.392	0	1
Other adult	0.0679	0.252	0	1
Child	0.0747	0.263	0	1
Interviewer supervisor	0.00314	0.0560	0	1
Paycheck provided	0.136	0.343	0	1
Interviewer perception of respondent's cooperation	4.867	0.392	1	5
Further socio-demographic controls				
Household income (log)	10.16	0.656	0.780	12.69
Male respondent	0.440	0.496	0	1
Age	46.18	17.79	15	97
Born in UK	0.962	0.191	0	1
Subjective health status	3.853	0.897	1	5
Race				
White	0.977	0.148	0	1
Black	0.00521	0.0720	0	1
Asian	0.0104	0.102	0	1
Other	0.00687	0.0826	0	1
Educational attainment				
Undefined qualification	0.0168	0.129	0	1

Table A2: Summary statistics

Variable	(1) Mean	(2) SD	(3) Min	(4) Max
None	0.162	0.368	0	1
Elementary	0.0326	0.178	0	1
Basic vocational	0.0825	0.275	0	1
Middle general	0.166	0.372	0	1
Middle vocational	0.0520	0.222	0	1
High general	0.0878	0.283	0	1
High vocational	0.0572	0.232	0	1
Lower tertiary	0.178	0.382	0	1
Higher tertiary	0.165	0.371	0	1
Marital status				
Never married	0.196	0.397	0	1
Married or living as couple	0.676	0.468	0	1
Divorced or separated	0.0706	0.256	0	1
Widowed	0.0575	0.233	0	1
Occupational status				
Self-employed or in employment	0.606	0.489	0	1
Unemployed	0.203	0.402	0	1
Retired	0.0382	0.192	0	1
Maternity leave	0.121	0.326	0	1
Other	0.0322	0.176	0	1
Weekly working hours	22.17	20.83	0	130
Number of children in household				
Aged 0 to 2	0.0712	0.268	0	3
Aged 3 to 4	0.0673	0.263	0	3
Aged 5 to 11	0.246	0.584	0	4
Aged 12 to 15	0.162	0.426	0	3
Aged 16 to 18	0.0736	0.286	0	2
Household members over 75 years	0.123	0.397	0	2
Household type				
Single non-elderly	0.0653	0.247	0	1
Single elderly	0.0662	0.249	0	1
Couple, no children	0.307	0.461	0	1
Couple, dependent children	0.313	0.464	0	1
Couple, non-dependent children	0.128	0.334	0	1
Lone parent, dependent children	0.0462	0.210	0	1
Lone parent, non-dependent children	0.0427	0.202	0	1
2+ unrelated adults	0.0147	0.121	0	1
Other household	0.0170	0.129	0	1
Home tenure				
Owner	0.781	0.414	0	1
Renter	0.203	0.403	0	1
Rent free or other	0.0159	0.125	0	1
Household owns a car	0.863	0.344	0	1
Further domain-specific controls				
Local recycling scheme	0.941	0.236	0	1
Household appliances				

Table A2: Summary statistics

Variable	(1) Mean	(2) SD	(3) Min	(4) Max
Cable TV	0.154	0.361	0	1
Satellite dish	0.498	0.500	0	1
Landline phone	0.914	0.280	0	1
Mobile phone	0.941	0.236	0	1
Colour TV	0.991	0.0946	0	1
VCR	0.963	0.189	0	1
Freezer	0.970	0.172	0	1
Washing machine	0.975	0.156	0	1
Tumble dryer	0.675	0.469	0	1
Dishwasher	0.489	0.500	0	1
Microwave	0.942	0.233	0	1
Home computer	0.384	0	1	
CD player	0.866	0.341	0	1
Type of central heating system				
None	0.0396	0.195	0	1
Gas	0.703	0.457	0	1
Oil	0.182	0.386	0	1
Electricity	0.0545	0.227	0	1
Solid fuels or other	0.0212	0.144	0	1
Further controls: Region of living and month of interview				
Geographic location				
Inner London	0.0103	0.101	0	1
Outer London	0.0276	0.164	0	1
Rest of South East	0.112	0.316	0	1
South West	0.0587	0.235	0	1
East Anglia	0.0285	0.166	0	1
East Midlands	0.0526	0.223	0	1
West Midlands Conurbation	0.0212	0.144	0	1
Rest of West Midlands	0.0317	0.175	0	1
Greater Manchester	0.0228	0.149	0	1
Mereyside	0.0151	0.122	0	1
Rest of North West	0.0293	0.169	0	1
South Yorkshire	0.0186	0.135	0	1
West Yorkshire	0.0194	0.138	0	1
South of Yorkshire, and Humberside	0.0214	0.145	0	1
Tyne and Wear	0.0116	0.107	0	1
Rest of North	0.0218	0.146	0	1
Wales	0.170	0.375	0	1
Scotland	0.174	0.379	0	1
Northern Ireland	0.153	0.360	0	1
Month of interview				
January	0.0142	0.118	0	1
February	0.00390	0.0624	0	1
March	0.00542	0.0734	0	1
September	0.480	0.500	0	1
October	0.332	0.471	0	1

Table A2: Summary statistics

Variable	(1) Mean	(2) SD	(3) Min	(4) Max
November	0.134	0.341	0	1
December	0.0312	0.174	0	1

N = 9,224

Table A3: Robustness checks

	(1)	(2)	(3)	(4)	(5)	(6)
	Using PCA scores instead of standardized sums as dependents			Including all available observations		
Dependent is energy-savings behaviours (standardized)						
UK affected by CC	0.1166*			0.0551		
	(0.0635)			(0.0468)		
UK affected in 30 years	0.2103***			0.1396***		
	(0.0417)			(0.0326)		
CC causes floods		0.0877			0.0648	
		(0.0579)			(0.0430)	
CC causes floods in UK		0.2046***			0.1160***	
		(0.0491)			(0.0358)	
CC causes famine			0.1037***			0.0634**
			(0.0375)			(0.0285)
CC causes famine in UK			0.2824***			0.1497***
			(0.0298)			(0.0219)
Dependent is waste-avoidance efforts (standardized)						
UK affected by CC	0.0804			0.0379		
	(0.0598)			(0.0409)		
UK affected in 30 years	0.1408***			0.1648***		
	(0.0382)			(0.0286)		
CC causes floods		0.0504			0.0575	
		(0.0517)			(0.0400)	
CC causes floods in UK		0.1339***			0.1476***	
		(0.0431)			(0.0342)	
CC causes famine			0.0892***			0.0746***
			(0.0344)			(0.0256)
CC causes famine in UK			0.1131***			0.1791***
			(0.0267)			(0.0202)
Observations	8,287	8,287	8,287	9,749	9,657	9,692
LL	-25153	-25146	-25117	-23930	-23686	-23735
BIC	52084	52069	52012	49670	49179	49279
$\rho(\hat{\varepsilon}_{energy}, \hat{\varepsilon}_{waste})$	0.2297***	0.2291***	0.2281***	0.2689***	0.2664***	0.2669***
	(0.0117)	(0.0117)	(0.0118)	(0.0117)	(0.0118)	(0.0118)

N = 8,287. Heteroskedasticity-robust standard errors clustered at the level of the household in parentheses. All estimations control for socio-economic and psychological variables, as well as regional and month dummies.

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$