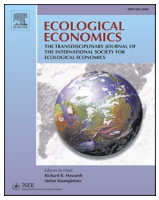
Ecological Economics 228 (2025) 108446

Contents lists available at ScienceDirect

Ecological Economics

journal homepage: www.elsevier.com/locate/ecolecon



Public support for degrowth policies and sufficiency behaviours in the United States: A discrete choice experiment

Dallas O'Dell [a,b,*], Davide Contu [a,c], Ganga Shreedhar [a]

[a] Department of Psychological and Behavioural Science, London School of Economics and Political Science, Houghton Street, London WC2A 2AE, UK
[b] Institute for Environmental Science and Technology (ICTA-UAB), Autonomous University of Barcelona, Bellaterra 08193, Spain
[c] School of Management, Canadian University of Dubai, City Walk Campus, Dubai, United Arab Emirates

ARTICLE INFO

Keywords:
Sufficiency
Behaviour
Degrowth
Policy support
Public acceptability
Discrete choice experiment

ABSTRACT

Research on degrowth and its policy proposals has rapidly expanded, despite lacking empirical evidence on public perceptions. One conceptual proposition for affluent populations is that lifestyle changes, such as undertaking sufficiency-oriented behaviours, may engender degrowth policy support. Our research empirically investigated U.S. public support for degrowth policies, its relation to sufficiency behaviours, and whether a degrowth framing influenced policy support. In a pre-registered, online discrete choice experiment ($N = 1012$), we elicited perceptions of four commonly advocated degrowth policies - work time reductions, downscaling fossil fuel production, universal basic services, and advertising restrictions. Analyses revealed significant support for some specification of each alternative policy, especially fossil fuel caps and universal healthcare. We also found a significant positive association between sufficiency engagement and supporting fossil fuel restrictions. However, latent class analysis suggested that the link between behaviour and policy support was less consistent for socially oriented policies, and that those who supported such policies did not engage in sufficiency most frequently. Degrowth framing only significantly influenced preferences for universal healthcare. These findings suggest an appetite for advancing eco-social policies in the United States but point to a nuanced relationship between sufficiency lifestyles and degrowth policy support.

1. Introduction

The links between economic growth and environmental protection have been debated for several decades (Kenis and Lievens, 2015; Meadows et al., 1972; Schmelzer, 2022; World Bank, 2012). Recently, many academics and activists in rich industrialised countries are assessing alternatives to growth-based economies (Fitzpatrick et al., 2022). Degrowth – a planned and equitable downscaling of consumption and production in the most carbon-intensive industries (e.g., fossil fuels) in affluent and high emitting countries – has gained much attention (Hickel et al., 2022; Kallis et al., 2018; Schmelzer et al., 2022; Schneider et al., 2010). Degrowth advocates propose that policies like work time reductions and resource caps can make space for transformative change (Fitzpatrick et al., 2022; Schmelzer et al., 2022). Yet policymakers are unlikely to shift away from growth-based economic agendas[1] without broad-based consent amongst the general population (Buch-Hansen, 2018). Despite the hundreds of published articles from the last decade detailing policy proposals in line with degrowth (Fitzpatrick et al., 2022), very little academic literature is concerned with public support for such policies.

One proposition for engendering greater degrowth policy support voluntarily is by harnessing the broader effects that engaging in sufficiency-oriented behaviours can have. Sufficiency behaviours are those aimed at restricting consumption within planetary boundaries, whilst ensuring adequate social protection for a good quality of life for all (Jungell-Michelsson and Heikkurinen, 2022; Lorek and Fuchs, 2013). Rather than advocating for individual behaviour change for mitigation purposes, sufficiency-oriented behaviours may instead shift values amongst communities and social groups (Kallis et al., 2020). In turn, value shifts may increase political awareness and policy support to enable the conditions for degrowth, leading to a sustainability transformation via a 'behaviour-to-transformation' pathway (Kallis et al.,

* Corresponding author.
E-mail addresses: d.odell@lse.ac.uk (D. O'Dell), davide.contu@cud.ac.ae (D. Contu), g.s.shreedhar@lse.ac.uk (G. Shreedhar).

[1] For example, both Labour and Tories in the U.K. have publicly advocated for economic growth in recent years (Kwarteng, 2022; Starmer, 2022), whilst U.S. President Joe Biden's platform explicitly focuses on growing the economy (The White House, 2023b).

https://doi.org/10.1016/j.ecolecon.2024.108446
Received 31 January 2024; Received in revised form 4 September 2024; Accepted 25 October 2024
Available online 13 November 2024

2020). Yet currently, there is no empirical evidence connecting individual sufficiency engagement with degrowth policy support.

This paper aims to address three research gaps: 1) do people in a rich industrialised country like the United States support degrowth policies? 2) is there a link between an individual's engagement with sufficiency behaviours and their support for degrowth policies? and 3) does framing these policies around degrowth objectives enhance or hinder support? To address these aims, we conducted a nationwide online survey with a discrete choice experiment (DCE) in the United States.

The main contributions of this paper are as follows. First, we aimed to examine support for degrowth policies in a broadly representative sample from the United States. Prior evidence has largely focused on attitudes and perceptions amongst experts (King et al., 2023; Lehmann et al., 2022), academics (Cosme et al., 2017; Drews et al., 2019) and policymakers (Ahvenharju, 2020; Kallis et al., 2023). Those measuring public support studied Sweden (Khan et al., 2023; Lee et al., 2023) and the U.K. (Thorman et al., 2020), both smaller countries which could be considered less polarised on climate issues (Carlsson et al., 2021; Pidgeon, 2012). Second, extending conceptual debates (Kallis et al., 2020; Lorek and Fuchs, 2013; Spangenberg and Lorek, 2019), we provide the first empirical evidence on a 'behaviour-to-transformation' pathway by studying how sufficiency behaviour relates to degrowth policy support. Third, we investigated how framing can influence support for specific policies, as opposed to support for the broader degrowth agenda (Krpan and Basso, 2021a; Tomaselli et al., 2021) amongst the general public. Fourth, we go beyond standard survey measures using Likert scale ratings to assess acceptability of generalised policies (e.g., work time reductions) (Khan et al., 2023; Thorman et al., 2020). Our discrete choice experiment enabled us to assess trade-offs between different degrowth policies, whilst comparing the popularity of specific proposals (e.g., work weeks consisting of 35 versus 28 h).

The remainder of the paper is structured as follows. **Section 2** provides an overview of relevant literature and presents hypotheses. **Section 3** details the methodology for design and analysis of our DCE. **Section 4** presents the results of the discrete choice experiment and associated analyses. **Section 5** discusses the findings, limitations, and areas for future research, and concludes the paper.

2. Literature review

2.1. Degrowth policies

Research on degrowth's policy agenda has proliferated over the last decade - a recent review counted over 500[2] proposals (Fitzpatrick et al., 2022). This literature identifies three broad goals of degrowth policies: 1) "reduce the environmental impact of human activities," 2) "redistribute income and wealth both within and between countries," and 3) "promote the transition from a materialistic to a convivial and participatory society" (Cosme et al., 2017, p. 321). Common examples include work-time reductions, universal basic incomes or services, caps on resource use and emissions, income caps or wealth taxes, and jobs guarantees (see Fitzpatrick et al. (2022) for a comprehensive list of goals, objectives, and instruments). Two recent Swedish studies investigated public perceptions of eco-social policies that guarantee minimum levels of social protection to satisfy human needs within planetary boundaries (Khan et al., 2023; Lee et al., 2023). Another study in the U.K. focused on policies aimed at low-consumption governance (Thorman et al., 2020). These studies included generalised policy objectives as opposed to specific proposals, using Likert scales to measure support for each policy separately. Other polls and citizens assemblies have examined the public acceptability of certain degrowth-relevant policies (Climate Assembly UK, 2020; Lage et al., 2023; Trades Union Congress, 2018; YouGov, 2019). To our knowledge no study has inquired about support for these policies as a comprehensive proposal in the United States.

To examine public support for degrowth policies, and possible trade-offs across policies, we narrowed down on four policy instruments from relevant literature (Cosme et al., 2017; Fitzpatrick et al., 2022). The aim was to create a degrowth policy package feasible in the United States that attempted to safeguard both ecological and social wellbeing.

Fossil Fuel Limits: This proposal involves direct restrictions on environmental impacts, especially through limiting carbon-based energy resource depletion and its associated emissions (Alcott, 2010). The degrowth policy literature is vague regarding what is meant by a resource cap or limit. One main challenge associated with resource limit policies is that quantifying an appropriate limit is both scientifically and economically complex, requiring both global and country-specific caps (Kallis and Martinez-Alier, 2010). Other complications include concerns over employment impacts when downscaling the industry (Buch-Hansen and Nesterova, 2023; McCarthy, 2019). While governments have passed end dates for phasing out fossil fuels (e.g., Denmark by 2050) and may ban new licenses, few have specified caps or instruments for dismantling existing operations (Frost, 2021). Polling in the United States shows support for dramatically reducing fossil fuel use (McCarthy, 2019), but less work has explored support for mechanisms to achieve this aim. We defined resource limits by focusing on fossil fuel production, and therefore indirectly consumption, as explained in **Section 3.3**.

Regulations on Advertising: This policy is focused on reducing waste and overconsumption (Stuart et al., 2020) and is advocated in association with others like work time reductions and resource limits (Gunderson, 2018; Stuart et al., 2020; van den Bergh, 2011; Videira et al., 2014). Advertising has been criticised for manufacturing desires for consumption, creating "false needs" (Debord, 1983; Marcuse, 1964). Typical proposals include restricting advertising in public spaces (Videira et al., 2014), bans or limits on advertising of status goods (Stuart et al., 2020), bans on advertising to children (Stuart et al., 2020), and bans, limits, and regulation of advertising for resource-intensive leisure consumption (e.g., long distance vacations, long-haul flights) (Gunderson, 2018). France recently proposed banning advertising of certain ultra-fast fashion companies (e.g., Shein) (Martin, 2024), whilst the Dutch city of Haarlem has banned meat advertising in public (Boffey, 2022). However, the impact of such city or country-level regulations tends to be location-specific, limiting their reach (Martin, 2024). The UK Climate Assembly (2020) demonstrated support for restricting advertising of high emissions goods, but there is little evidence from the United States. We defined advertising regulations as policies that limit the ability for firms to advertise high-emissions products.

Work Time Reductions (WTR): This policy is aimed at emissions and consumption reduction (Platform London, 2021), as well as an improved quality of life outside the toil of work (Kallis et al., 2013). In addition to more leisure time, working less would ideally mean more free time to pursue creativity, community-oriented work, care duties, and environmental stewardship (Schor, 2015; Stuart et al., 2020). Proposals emphasise that WTR ought to be paired with regulations on advertising and limits to resource use (Fitzpatrick et al., 2022) to mitigate increased time in energy-intensive activities during expanded leisure time (Gunderson, 2018; Sekulova et al., 2013). A four-day work week has been trialled voluntarily by companies in Europe (Joly et al., 2024), the U.K. (Stewart, 2023), and more recently in the U.S. (Artry, 2022). Polling suggests that the majority of U.S. residents support these policies and find them feasible given current workloads (Carbonaro, 2023). One challenge is whether such reductions impact pay, though most degrowth proposals would not reduce workers' pay (Fitzpatrick et al., 2022; Kallis et al., 2013). We defined WTR as policies to reduce the number of days or hours in the working week without affecting income.

Universal Basic Services (Healthcare): With the downscaling of consumption and production, public provisioning of services will be required to ensure that basic necessities are met, to maintain or increase

[2] The authors identify 530 proposals, including 50 goals, 100 objectives, and 380 instruments.

quality of life (Hickel, 2020a). These necessities include the areas of housing, transportation, and in the United States, access to healthcare. The U.S. Medicaid[3] system offers a relatively straightforward[4] metric for creating different levels of expansion, by increasing the eligibility threshold (i.e., income level) up to a point where all U.S. citizens are covered regardless of their income. Most European countries already offer public health insurance, though challenges include administrative coordination and political support for funding (e.g., Darrudi et al., 2022). U.S. polls indicate support, especially amongst Democrats, for a public insurance option to compete with private plans (KFF, 2020). Experimental work indicates increased support when framing policies as expansions of existing policies (Karra and Sandoe, 2020). We defined health insurance policy as expanding access to (free) public health insurance.

To assess the baseline levels of policy support in the United States, we first conducted exploratory analysis to establish whether there would be significantly greater support for alternative policy attributes in line with degrowth, compared to the Status Quo.

2.2. Sufficiency behaviours & degrowth

Sufficiency has been connected to both consumption and production, conceptualised as both a goal in itself and a way to bring these systems within planetary boundaries (Jungell-Michelsson and Heikkurinen, 2022). Despite the available definitions of sufficiency, there is less clarity in how to operationalise it (Jungell-Michelsson and Heikkurinen, 2022). We take the position that sufficiency is an important value or principle, centred around producing and consuming "enough," within the broader degrowth agenda (Schmelzer et al., 2022). We further focus on its application to consumption.

Sandberg (2021) outlined four types of consumption changes toward sufficiency. These include *absolute reductions*, i.e., reducing the quantity consumed; *modal shifts*, or shifting toward less resource intensive consumption modes; *product longevity*, or extending the lifespan of products; and *sharing practices*, i.e., sharing products or spaces with others. These four typologies provide a useful basis for categorising pro-environmental behaviours across a variety of domains (see **Section 3.3**). While some research suggests that sufficiency lifestyles can help mitigate the climate crisis within our current system (Kropfeld et al., 2018; Verfuerth et al., 2019), less work has investigated how sufficiency behaviours might facilitate societal transformation more broadly.

Some degrowth scholars advocate for the adoption of lifestyle changes to shift values and heighten political awareness, rather than mitigating emissions outright (Kallis et al., 2020; Spangenberg, 2014). Kallis et al. (2020) notes "taking personal action is a first step toward building societies that implement needed changes in policies and institutions" (p. 51). The aforementioned "behaviour-to-transformation" pathway suggests that lifestyle changes, such as adopting sufficiency, may encourage a reassessment of values, such as more communal, socially equitable, and sufficiency-oriented goals for society. These values may also enhance support for degrowth policies, which aim to break down structural barriers to the transition. One mechanism linking behaviour to policy support might be through enhanced politicisation, in developing a greater interest in active political engagement (G. Kallis, personal communication, January 10, 2024). Once this heightened political motivation translates into policy adoption, societal transformation toward degrowth can occur (Kallis et al., 2020). This pathway may be considered a form of prefigurative politics, whereby activists seek to make the kind of world they envision on a smaller and more personal scale (Breines, 1989; Schmelzer et al., 2022). However, empirical evidence for this pathway is lacking. The present research sought to test this relationship empirically, specifically focusing on how sufficiency practices might be associated with degrowth policy support.

Sufficiency in sustainable consumption is often manifested as individual behaviour change, which could be considered a subset of pro-environmental behaviour focused on moderation (Jungell-Michelsson and Heikkurinen, 2022). Literature shows there is mixed evidence regarding the relationship between pro-environmental behaviour (PEB) and policy support. Some findings suggest that engaging in PEBs was associated with a lower level of environmental policy support, as individuals felt they had already done enough (e.g., Noblet and McCoy, 2018) or that government regulation was less necessary (Werfel, 2017). Others found that engaging in PEBs was associated with a higher level of support, e.g., to maintain their pro-environmental self-image (Nilsson et al., 2017). A third perspective considers how behaviour and policy support are instead related through intrinsic pro-environmental motivation (Sharpe et al., 2021). While this empirical evidence is mixed, we wanted to test the viability of the transformation pathway, and accordingly pre-registered the following hypothesis:

H1. Self-reported engagement in sufficiency behaviours will increase policy support for all degrowth policy attributes compared to the Status Quo.

It is worth noting that there may be socio-economic and structural dilemmas complicating engagement in sufficiency behaviours, for example, that sufficiency often requires a certain level of privilege (e.g., Heindl and Kanschik, 2016), or that high consumption lifestyles can be locked-in (e.g., through energy infrastructure, see Sanne, 2002; Wiedmann et al., 2020). Further, sufficiency behaviours may be capacity-driven (e.g., downshifting toward voluntary simplicity) or needs-driven (e.g., Gorz, 1997; Koukoufikis, 2020), which may confound the link between sufficiency behaviours, broader degrowth values, and policy preferences.

However, high levels of consumption in the Global North, even amongst less affluent people, are enabled by appropriating cheap labour and resource extraction in low- and middle- income countries (e.g., in the fast fashion industry, see Barber, 2021; Bick, 2018; Hickel, 2021). Therefore, while voluntary sufficiency may be less accessible depending on socio-economic status, sufficiency will be needed (i.e., through structural changes) across societies in the Global North to mitigate global inequalities (e.g., Jungell-Michelsson and Heikkurinen, 2022; Trainer, 2021).

Given these dilemmas around socio-economic status and individual differences, we explored whether the link between sufficiency and degrowth policy support (H1) differed for various demographic and personal characteristics.

2.3. Environmental policy framing

Prior literature testing public opinion of degrowth has focused on how framing degrowth influences people's perceptions of the agenda, primarily focusing on gain versus loss, or related frames. While the word degrowth has been shown to elicit negative reactions (Drews and Antal, 2016; Raworth, 2015; Tomaselli et al., 2021; J. C. J. van den Bergh, 2017), support for the degrowth agenda increased when framed using a promotion (i.e., gain) focus of achieving positive consequences rather than a prevention (i.e., loss) focus (Krpan and Basso, 2021b). Others have found that framing degrowth by comparing wellbeing and environmental gain vs. loss influenced cognitive and emotional reactions,

[3] The U.S. Medicaid system currently offers government-sponsored health insurance based on an individual or household income-level relative to a certain percentage of the federal poverty line (FPL). Otherwise, health insurance is privatised and requires individuals to access coverage through employment or purchase plans on the Health Insurance Marketplace at a higher rate (USAGov, 2023).

[4] One point of complication is that different states have different policies for the income threshold to qualify for Medicaid – that is, as of December 2023, 41 states (including DC) have expanded to 138 % of the FPL under the Affordable Care Act, while the rest use lower thresholds (KFF, 2023). For simplicity and given that most states have expanded, we used the 138 % figure as the baseline.

but not attitudes (Tomaselli et al., 2021). However, there is little evidence on how framing a policy package around degrowth (or not) may influence people's support for specific policy proposals.

Therefore, we included a framing treatment in the experiment to compare perceptions of policies aimed at transforming the economic system (degrowth treatment) versus a neutral framing (control). We wanted to probe the popularity of the policies themselves, separate from any degrowth connotations. This inquiry was intended to test whether support was influenced by the extent to which a policy was aligned with degrowth, or whether the policy proposals may achieve broader appeal without being connected to the degrowth platform. This treatment also safeguarded against protest behaviours, whereby respondents may not give truthful responses if they reject some element of the DCE scenario (Meyerhoff et al., 2014). We considered protests responses likely, especially following the degrowth framing, given the centrality of economic growth in U.S. politics and culture (Collins, 2002). We therefore pre-registered the following non-directional hypothesis:

H2. Exposure to the degrowth background information treatment will influence policy support for all degrowth policy attributes compared to the Status Quo.

While we pre-registered other hypotheses, we focus only on these two and the aforementioned exploratory analyses for the present paper. Please refer to **Section 7** on Transparent Changes from Pre-registration for other pre-registered hypotheses and deviations. All analyses related to other hypotheses are included in the **Supplementary Materials (e.g., Sections G & I)**.

3. Method

3.1. Discrete choice experiment (DCE)

We conducted a discrete choice experiment to assess public preferences for degrowth policies in a U.S. sample (N = 1012), which we recruited to be representative by age, gender, and geographic region. Participants were provided with a set of choices (i.e., choice tasks) comprised of degrowth policies (see **Section 3.3**). Each participant was shown eight randomly selected choice sets out of a possible 40. They were asked to choose one of three alternative policy proposals (Option A, Option B, or Status Quo). To finalise attributes and their specific levels for each of the policies, we conducted focus groups amongst a convenience sample from the United States (see **Supplementary Materials Section A**). Qualitative pretesting is recommended in DCEs to ensure content credibility and comprehensibility (Johnston et al., 2017).

The specific combination of levels for each attribute in Option A and B were selected through a multi-step process following Contu et al. (2016). This process, using the NGENE software (ChoiceMetrics, 2014), made the design more efficient by limiting the number of possible combinations. In the initial phase of data collection, combinations were extracted from a fractional orthogonal design. This was first administered to a pilot sample of around 100 participants via Prolific Academic. Using this pilot data, we estimated Multinomial Logit (MNL) and Random Parameters Logit (RPL) models, obtaining priors to be included within a Bayesian Efficient design. Based on these priors, we updated the combination of choice cards to provide to the main sample.

We then recruited our sample via a market research firm. Our design was pre-registered after the first 100 responses were collected,[5] given budget constraints on running additional pilot studies and our lack of control over data collection using the outside company. Once again, we ran the process of obtaining priors and improving the design efficiency, using around 23 % of the final sample (N = 230). We updated the choice sets available one last time before recruiting the remaining participants,[6] consistent with Contu et al. (2016). In our pre-registration, we specified this final step to analyse and update the design after collecting data from 20 to 30 % of the respondents.

3.2. Participants

Based on grant funding and the length of our survey, we aimed for a final sample of 1000 participants. This was also consistent with an a priori power analysis using G*Power (Faul et al., 2009), specifying a t-test with a small effect size (d = 0.2) based on pilot data.[7]

N = 1406[8] consented to take the survey. The final sample consisted of N = 1012 participants, after excluding participants who did not report taking the survey seriously (N = 123), those who failed both comprehension checks (N = 270),[9] and one participant for not responding to any choice cards. **Section 4.1** contains more details on the demographic makeup of the sample.

3.3. Policy attributes & materials

We included six attributes in our experiment: the four policies, along with a cost and benefit. We included a percentage increase in income taxes as the cost, and the emissions reduction target as the benefit. Importantly, given degrowth's objective to reduce inequality, the tax could not unduly burden those with lower incomes. Accordingly, the tax increases were higher for the top 1 % of earners (i.e., households earning over $600 K), who faced tax increases three times more[10] than the 99 %.

Table 1 shows a breakdown of the attributes and levels. Fig. 1 displays a sample choice card. Work time reductions ranged from work weeks of 5 days, 35 h to 4 days, 28 h, without affecting salaries. Fossil fuel limits were characterised as government limits on the extraction and production of fossil fuels by energy firms, either as a cap or full ban. Advertising limits restricted advertising of high emissions products, either in public spaces or in general. Healthcare coverage ranged from an expansion of Medicaid to a public option of universal health insurance. Proposals also varied by the amount of emissions reduction (50 % - 70 %) and income tax increase (1 % - 5 %) to fund the policies. The Inflation Reduction Act had passed in U.S. Congress shortly before our survey launched, promising a 40 % reduction in emissions by 2030 (The White House, 2023a). We characterised this act as the status quo, which

[5] Researchers analysed these first 100 responses to check for anomalies related to data quality, but no updates or changes to the design were made before the pre-registration. Nor were any changes made to predictions (i.e., hypotheses), analysis plans, or any other plans for the research pertaining to the pre-registration. See **Supplementary Materials Section H** for analyses excluding the data collected before pre-registration, which mostly remains robust.

[6] All responses, except those from the Prolific pilot, were pooled for analysis, though our data build accounts for the two variations of choice sets, before and after updating the design. The differences between the two sets of choice cards were minor. In the final set of 40, the choice sets represent more meaningful tradeoffs based on prior information about which levels were more commonly selected.

[7] We conducted an a priori power analysis, based on testing the difference between two independent means, with effect size d = 0.2, power = 0.8, and allocation ratio = 1. This suggested a minimum total sample of N = 620, or 310 in each group.

[8] Given the rate of failure for the comprehension checks in pilot testing, we oversampled to ensure a large enough final sample.

[9] N = 49 participants failed the two comprehension checks as well as the seriousness check.

[10] Our tax increases were either 1 %, 3 %, or 5 % for the bottom 99 % of earners making under $600K/year. Those who made above $600K would face a 3 %, 9 %, or 15 % increase, or 3× more than the value for lower earners. We rounded up to $600K from the value of $597,815, which was the annual income needed to be considered the top 1 % of earners across the United States (Miranda, n.d.) at the time of designing the study. This is based on 2018 IRS data, using 2021-adjusted dollars.

Table 1
Choice Set Attributes and Specific Levels.

Attributes	Attribute Levels	Number of Levels
Work time	Policies reduce the number of days/h in the working week to: i) 5 days/35 h, ii) 4 days/32 h or iii) 4 days/28 h. **Status Quo:** The current work week is 5 days/40 h.	3
Fossil fuel limits	Policies restrict extraction of fossil fuels (e.g., oil, gas, and coal) in the U.S. via: i) an annual cap on extraction and production volumes or ii) a full ban on new extraction. **Status Quo:** There are currently no restrictions or caps in place.	2
Advertising limits	Policies limit the ability for firms to advertise for high-emissions products (e.g., animal products, long-haul flights, private jets): i) in public spaces or ii) in general. **Status Quo:** There are currently no restrictions in place.	2
Healthcare coverage	Policies expand access to (free) public health insurance to include: i) coverage for those at 500 % of the Federal Poverty Line or ii) coverage for all residents of the U.S., regardless of income. **Status Quo:** Medicaid currently covers those at 138 % of the FPL.	2
Emissions reduction	By 2030, policies aim to reduce annual emissions from 2005 levels by: i) 50 %, ii) 60 % or iii) 70 %. **Status Quo:** The Inflation Reduction Act forecasts a 40 % reduction.	3
Income tax increase	The two alternative policy choices will require additional annual costs compared to the current policy. For those making less than $600 K, policies will require an increase in the amount of income tax paid by: i) 1 %, ii) 3 % or iii) 5 %. **Status Quo:** No change.	3

Notes: Each choice set (Option A or B) on a given choice card consisted of only one level for each attribute, and every attribute was included on every choice card. Participants randomly received 8 choice cards.

should be clearly explained to DCE participants to convey how alternative scenarios depart from it (Johnston et al., 2017). For each attribute, the baseline level in the model is the least ambitious proposal, which is listed first in Table 1.

The main outcome variable of interest was the choice of a policy proposal. We also asked participants to rate the frequency of their engagement on a variety of sufficiency-oriented behaviours. This battery of 12 items was adapted from Shreedhar and Freitag (2024), which measured behaviours for preventing extinction. We streamlined the list of behaviours, using the four sufficiency typologies outlined in Sandberg (2021) to determine inclusion.[11] Participants were asked to rate how often they had engaged in each behaviour over the past year, ranging from 1 (Never) to 7 (Always). Table 2 displays the mean and standard deviation of each item in our sample. After averaging scores across items ($\alpha = 0.88$), we created a binary measure[12] of engagement (greater than or equal to 4)[13] and non-engagement (less than 4)[14] from this composite.

We included several other variables related to participants' characteristics that might be relevant for policy support or sufficiency engagement. Trust in government was adapted from Faure et al. (2022), Kettle and Dow (2016), and Kim et al. (2013). Political ideology, based on left-right orientation, was adapted from Whitmarsh and Corner (2017). Voluntary simplicity beliefs were measured via the material simplicity sub-scale from Rich et al. (2020). Universalism-concern and universalism-nature, measuring values for protecting the most vulnerable and protecting nature, respectively, were adapted from Schwartz et al. (2012). See **Supplementary Materials Section D** for items and alpha values, indicating all scales were reliable. As socio-demographic characteristics, we also asked age, educational attainment, income, race, and ethnicity, including a separate question on Hispanic or Latin American heritage (US Census Bureau, n.d.), employment status, gender, and state of residence. We also asked a set of debrief questions (Johnston et al., 2017) to assess the quality of the choice experiment and to further contextualise the sample (**Appendix C**).

The experimental treatment variable (H2) comprised treatment (i.e., Degrowth) and control (i.e., Neutral) versions of the background information, which was shown to participants only once before receiving the choice cards. The main differences between the two versions include the level of detail in the text and the inclusion of a section on societal transformation in the Degrowth treatment only. Participants in the treatment group were given information about an appeal by the Intergovernmental Panel on Climate Change (IPCC) to transform economic systems in affluent societies like the United States by reducing consumption and production whilst expanding social support. This policy objective was intended to shift societal priorities away from excessive consumption and resource depletion, while providing more social protections to ensure that these changes do not reduce quality of life. See **Supplementary Materials Section B** for the two experimental stimuli.

We measured two comprehension checks related to the background information that were used for exclusions, to ensure the quality of our responses (Kruse and Atkinson, 2022). These questions related to 1) the emissions reduction goal for the US Government (i.e., 50 %) and 2) the warming limit set out by the Paris Agreement (i.e., 1.5 degrees Celsius). These also acted as attention checks. Participants who failed both comprehension checks were excluded from analysis.[15] We also asked a seriousness check (Aust et al., 2013) and excluded those who did not take the survey seriously.

3.4. Study procedure

Before participants consented to take part in the study, they answered a set of demographic questions to determine their eligibility.[16] Once they passed through and provided consent, half of participants were shown the sufficiency questions first, while the other half were given the discrete choice experiment first. This variation was done to check for ordering effects. The discrete choice section of the survey comprised background information on the social and ecological crises (i.e., the treatment), the hypothetical policy scenario, and the policy attributes included in their choice sets. Participants were randomly

[11] This categorisation was done independently by two researchers, one internal to the project and one external, who discussed and resolved any discrepancies to create the final set of 12 behaviours across a variety of domains.

[12] We chose a binary measure of sufficiency to simplify our comparison and because we felt it was more meaningful to interpret than a one unit increase in sufficiency engagement associated with a continuous measure. However, the RPL analysis using the continuous variable are included in the **Supplementary Materials** as well.

[13] This included "Sometimes," "Often," "Very often," and "Always."

[14] This included "Never," "Very rarely" and "Rarely."

[15] We also included a third comprehension question about how much more tax the over $600K income group would pay compared to those under this threshold (the correct answer is 3×). We did so to assess whether respondents noticed this information, as it was designed to fit within degrowth's principles of redistribution and reducing inequality. However, we did not make any exclusions based on this question.

[16] These questions on age, gender, political ideology, and race were tied to quotas set on Qualtrics in an attempt to maintain a representative sample, in addition to what was provided by the survey research company. However, we had to remove these quotas on the request of the company. See **Section 5.2** for implications and potential biases associated with not using a representative sample.

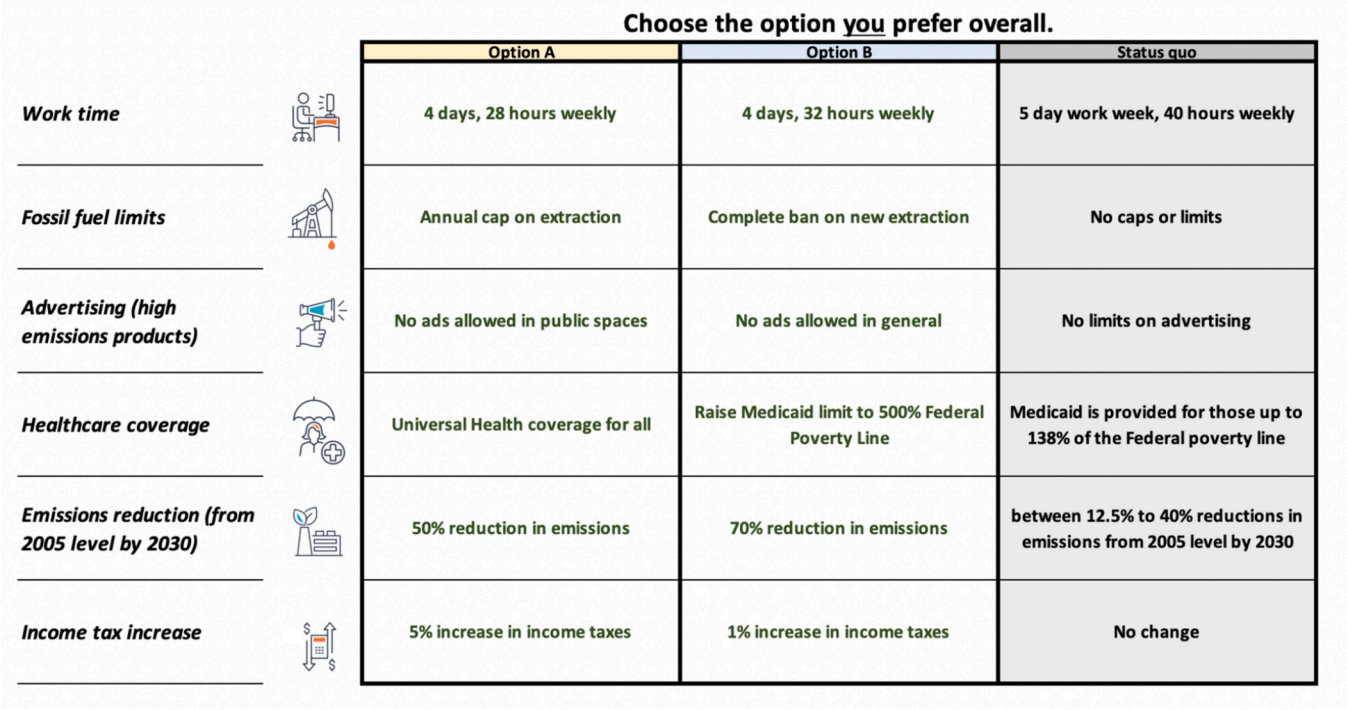


Fig. 1. Sample Choice Card from Discrete Choice Experiment.
Notes: This is one example out of the possible 40 iterations that respondents may have seen. The choice cards always contained three options. The levels in Option A and Option B changed in each round of choices. The levels in the Status quo column stayed the same across all choice cards. Participants had to choose one column in its entirety.

Table 2
Sufficiency Behaviour Scale Items, Mean and Standard Deviations.

Item	Mean Frequency	Standard Deviation
Reduced water use (e.g. shorter showers)	4.25	1.79
Chose meals with less meat and animal proteins	3.55	1.84
Avoided flights	4.43	2.21
Bought fewer things (e.g. shop less, reuse clothes, avoid plastic)	4.24	1.72
Considered having no or fewer children	3.58	2.46
Bought fewer animal products (e.g. less leather, more plant-based items)	3.64	1.93
Ate a plant-based diet	3.04	2.03
Used active travel (e.g. walking and cycling)	3.78	1.93
Worked and studied from home	3.61	2.20
Shared resources with others (e.g. micro-grids, car-sharing)	3.00	1.94
Wasted less food (e.g. reusing leftovers, composting)	4.86	1.76
Used renewable energy in your home	3.23	2.01
Composite (average)	**3.77**	**1.32**

Notes: Items were adapted from Shreedhar and Freitag (2024), using sufficiency typologies from Sandberg (2021) to determine inclusion. Participants were asked to rate how often they have engaged in each behaviour over the past year, ranging from 1 (Never) to 7 (Always). Scores were averaged across items, before making a binary measure of engagement (≥4) or non-engagement (<4).

allocated to treatment or control conditions. After seeing an example choice card, participants then proceeded to eight rounds of choice sets, each time choosing one alternative proposal (Option A, Option B) or the Status Quo. The next step was the DCE debrief questions. Lastly, everyone answered the other personal characteristics and socio-demographic questions and exited the survey.

Before launching the survey or conducting any piloting, the study received the requisite ethical approval. Data was collected between September 8 and October 7, 2022. The median duration of the survey was around 17.5 min, whilst the mean duration was substantially higher at around 54 min due to outliers.

3.5. Analysis plan & models

This section provides an overview of the utility functions used in analysing DCE data. **Appendix A** contains more detailed methodological specifications for each model, including probability functions. To run each model presented in this paper, we used R's Apollo package (Hess and Palma, 2019).

The choice experiment method comes from McFadden's (1974) Random Utility Theory and Lancaster's (1966) theory of value. The choice experiment is a stated preference methodology, which assumes that amongst a set of choices, an individual will select the option that brings them the greatest utility. The utility function is typically split into two components, one deterministic, i.e., observable (V) and one stochastic, i.e., random (ε). For the MNL and RPL models, the utility of the individual i for an alternative choice j is given by:

$$U_{ij} = \mathrm{V}_{\mathrm{ij}} + \varepsilon_{\mathrm{ij}} \quad (1)$$

Further, V_{ij} is given by eq. (2), where X is the matrix of the k attributes. β is the vector of coefficients that will be estimated, with a scale parameter normalized to one.

$$\mathrm{V}_{\mathrm{ij}} = \Sigma\, \beta_{\mathrm{ikj}} \mathrm{X}^{'}_{\mathrm{ikj}} \quad (2)$$

The MNL assumes preference homogeneity amongst a sample. The RPL relaxes this assumption, assuming a continuous distribution of parameter estimates with a mean and standard deviation for each coefficient.

Meanwhile, for the latent class model, utility is estimated for distinct classes or groups with the same parameters in each class or segment s, such that there is a separate utility parameter for each segment:

$$U_{ij|s} = \mathrm{V}_{\mathrm{ij|s}} + \varepsilon_{\mathrm{ij|s}} \quad (3)$$

Importantly, the latent class model is probabilistic, such that the model does not assign an individual to a particular class but produces a conditional probability that a respondent would fit into each class in the model (Sinha et al., 2021).

4. Results

4.1. Descriptive results

For all analyses except those testing H2, we combined the experimental groups into a single pooled sample ($N = 1012$, Table 3), as there were no significant differences across the two treatment groups in terms of demographics and characteristics (see **Supplementary Materials Section C** for balance checks). Our sample was representative by income and gender. We oversampled participants who were older, had a university degree[17] and identified as white. We under sampled other racial and ethnic categories, except indigenous populations and 'not otherwise listed,' which were broadly representative. See **Appendix B** for detailed comparisons with the U.S. population.[18]

13.4 % of our sample always selected the Status Quo option, whilst 54 % never chose this option (see Fig. 2), providing some preliminary evidence of support for alternative policies. For our sufficiency engagement measure, nearly 45 % of the sample had engaged (i.e., 'Sometimes' or more) in the last year.

4.2. Policy support & sufficiency engagement – MNL & RPL

To explore baseline policy support, we first used a multinomial logit model. Table 4, Column (1) contains these results. There was significant support across the sample for three out of the four degrowth policies compared to the Status Quo at the 1 % significance level. The negative sign for resource limits suggests that participants significantly preferred a cap to a full ban. The positive sign for WTR and health insurance indicates that participants significantly preferred the shortest working weeks and universal healthcare over less ambitious policies. People significantly preferred greater emissions reductions but were sensitive to tax increases to fund such policies.

To allow for heterogeneity of preferences, we also ran a random parameters or mixed multinomial logit model, contained in Column (2). These results are consistent with the MNL specification, but further indicate support for advertising limits at the 5 % significance level. Respondents preferred a ban in public spaces to a general ban. Column (3) shows the standard deviations for this model. The fact that nearly all parameters are significant (except ad limits) indicates heterogeneity in preferences amongst the sample, providing evidence in favour of the RPL model over the MNL, which restricts preference heterogeneity. Comparing the information criteria across the two models, it is also clear that the RPL is a better fitting model, with a higher pseudo-Rˆ2, and lower AIC and BIC. Overall, our results indicate that the general public favours degrowth policies over the status quo on average. As these analyses were exploratory, we applied a Bonferroni adjusted significance criterion α=0.0125 (0.05 / 4 total exploratory analyses), which all significant coefficients except advertising limits met.

To test H1 on sufficiency behaviours, we ran another RPL in Column (4) interacting the binary sufficiency engagement variable with each attribute. Examining the interaction terms, participants who engaged in sufficiency behaviours were less likely to support the Status Quo than those who did not engage, at the 1 % significance level. Sufficiency-

[17] The U.S. data was available for 25 years and older, whereas our sample consists of 18–24-year-olds as well, so the numbers are not exactly comparable. However, this would bias our sample in the opposite direction, i.e., being even more educated than the U.S. general population.

[18] All U.S. population figures are taken from the U.S. Census Bureau Population Estimates from July 1, 2022. See **Appendix B** for more details.

Table 3
Sample Characteristics and Summary Statistics.

	N = 1012					
Baseline Characteristic	n	%	Mean	SD	Min	Max
Gender						
Female	516	51.0%	–	–	–	–
Male	494	48.8 %	–	–	–	–
Prefer not say	2	0.2 %	–	–	–	–
Education						
Some HS	23	2.3 %	–	–	–	–
High school diploma	245	24.2 %	–	–	–	–
Some undergraduate	214	21.1%	–	–	–	–
Bachelor's degree	343	33.9 %	–	–	–	–
Graduate degree	187	18.5 %	–	–	–	–
Income (£)						
Less than $20,000	125	12.4 %	–	–	–	–
$20,000 - $34,999	128	12.6 %	–	–	–	–
$35,000 - $49,999	111	11.0%	–	–	–	–
$50,000 - $74,999	163	16.1%	–	–	–	–
$75,000 - $99,999	188	18.6 %	–	–	–	–
$100,000 - $199,000	230	22.7 %	–	–	–	–
$200,000 - $399,000	27	2.7 %	–	–	–	–
$400,000 - $599,000	1	0.1%	–	–	–	–
Over $600,000	3	0.3 %	–	–	–	–
Prefer not say	36	3.6 %	–	–	–	–
Race & Ethnicity						
Asian	22	2.2 %	–	–	–	–
Black	82	8.1%	–	–	–	–
White	873	86.3 %	–	–	–	–
Other	35	3.5 %	–	–	–	–
Hispanic	86	8.5 %	–	–	–	–
Not Hispanic	927	91.6 %	–	–	–	–
Age	–	–	50.53	18.32	18	89
Political Identity	–	–	5.43	2.72	0	10
Trust in Government	–	–	3.53	1.31	1	6.75
Voluntary Simplicity Engagement	–	–	5.07	1.19	1	7
Universalism Concern	–	–	5.56	1.14	1	7
Universalism Nature	–	–	5.44	1.19	1	7
Climate Knowledge	–	–	3.30	1.14	1	5
Climate Beliefs	–	–	4.88	1.27	1	7
Ecological Policy Agreement	–	–	4.86	1.52	1	7
Social Policy Agreement	–	–	4.88	1.60	1	7
Sufficiency Engagement						
Engaged (≥4)	558	55.1%	–	–	–	–
Did not engage (<4)	454	44.9 %	–	–	–	–
Poverty Beliefs						
People not doing enough	434	42.9 %	–	–	–	–
Circumstances beyond their control	444	43.9 %	–	–	–	–
Don't know / non-response	134	13.2 %				

Notes: For continuous variables, mean and standard deviation (SD) are provided. For categorical variables, count (n) and percent (%) of each category are provided. Minimum and maximum values are provided for all numeric variables. For income, the minimum value of 0 is associated with "Prefer not say." Gender was defined as how a person identified, with a non-binary option. Given the small sample sizes, "Other" for race and ethnicity represents North American Indigenous ($N = 9$), Native Hawaiian / Pacific Islander ($N = 1$), and Not Otherwise Listed ($N = 25$). Not all categories in the Race & Ethnicity section sum to 100 %, as race and Hispanic ethnicity were separate questions. For poverty beliefs, the responses of the "Don't know / non-response" group were set to missing.

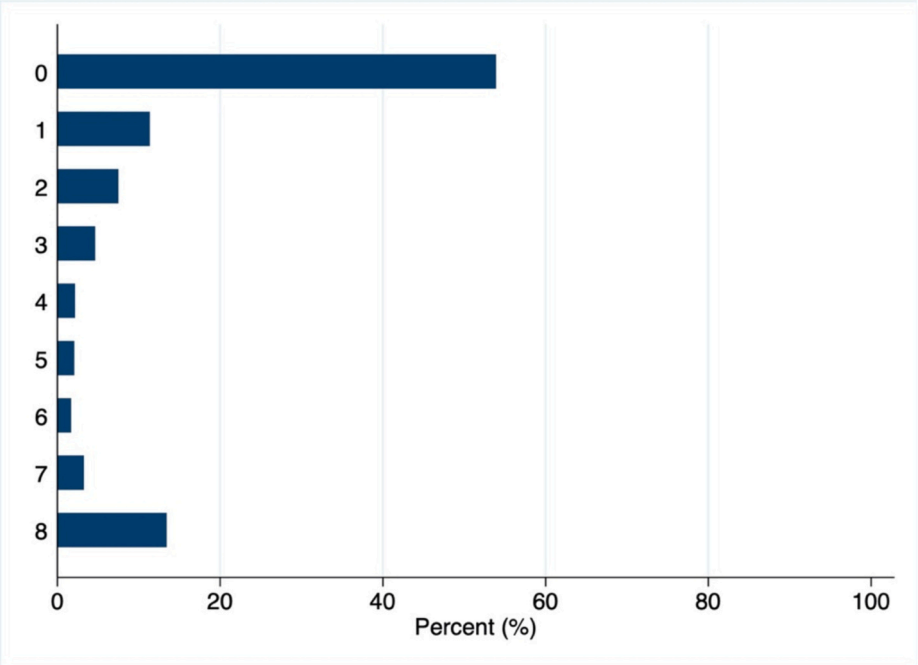


Fig. 2. Frequency of Selecting Status Quo Policies.
Notes: This chart shows how often (in percent) respondents selected the Status Quo policy option amongst their eight choice sets. 0 = never selected the Status Quo option, while 8 = always selected this option.

oriented participants were more likely to support a stricter resource ban over a cap (1 % significance level), and a general ban on advertising high emissions goods over a ban in public spaces (5 % level). They were also less sensitive to tax increases than those who did not engage at the 5 % significance level. Work time reductions and expanding health insurance were not significantly predicted by sufficiency engagement, nor were any preferences for emissions reduction targets. There again appears evidence of preference heterogeneity, as all standard deviations except for the ad limits parameter are significant in Column (5). These results provide some support for H1, though most robustly for fossil fuel restrictions. See **Supplementary Materials Section E** for results of the RPL using the continuous sufficiency measure, which are mostly consistent, as the interactions with resource limits and taxes remained significant. However, the interaction with ad limits was no longer significant at the 5 % level, whilst the interaction with work time reductions became significant at the 5 % level.

4.3. Latent class analysis – Sufficiency engagement

Given the RPL's evidence on heterogeneity in respondent choices for certain attributes, we used a Latent Class Model (LCM) to further understand heterogeneity across individuals. LCMs require the researcher to make an informed decision on the number of classes to be chosen, most commonly using the Bayesian Information Criterion (BIC) and the Akaike Information Criterion (AIC). Without the inclusion of covariates, the 4-class model appeared the most appropriate, as it produced the lowest information criteria whilst achieving convergence. When including covariates to explain class allocation, the 3-class model yielded the more significant parameters, larger class sizes, and easier interpretation of the results than the 4-class model. Although the information criteria were slightly better under the 4-class model, we prefer the 3-class model with covariates due to other substantive criteria, which can be as important as statistical criteria (Weller et al., 2020).

Following best practice, our covariate selection was driven by theoretical relevance (Weller et al., 2020; Wurpts and Geiser, 2014), mainly sufficiency behaviours to test our hypothesis, as well as socio-demographic covariates of age, education, and employment status, which were previously found relevant for climate or eco-social policy support (e.g., Khan et al., 2023; Ziegler, 2017). Given that we did not pre-register this specific analysis to test H1, we have applied the Bonferroni-adjusted $\alpha = 0.0125$. See **Appendix F** for the 4-class model with covariates, and the **Supplementary Materials Section J** for baseline models without covariates.

Table 5 reports the results of the LCM with 3 classes and our selected covariates. Membership in Class A is associated with support for alternative policies over the Status Quo, preferences for fossil fuel caps over bans, and sensitivity to tax increases, all at the 1 % significance level. Class A represents around 21 % of our sample. Membership in Class B is associated with greater support for status quo policies at the 1 % significance level. No other attributes are significant for Class B, which comprises approximately 18 % of our sample. Finally, Class C is our largest class, comprising 61 % of our sample. This class supports alternatives to the Status Quo at the 1 % level and several degrowth policy attributes, including the shortest work weeks, universal healthcare, and more ambitious emissions reduction targets, all at the 1 % significance level. They also prefer a fossil fuel cap to a ban, and are sensitive to tax increases, both at the 1 % significance level.

Further, Class A (at the 1 % level) and Class C (at the 5 % level) have significantly greater levels of engagement in sufficiency and are less likely to be formally employed than the Class B. While there was no significant difference in sufficiency engagement between Class A and C, Class A exhibited the highest likelihood of engagement.

To summarise each class, Class A could be considered 'Dedicated Environmentalists,' as they are most likely to practice sufficiency personally and support ecological but not social policies. Class B may be characterised as 'Opponents,' being least likely to practice sufficiency or support any degrowth policies. Finally, Class C could be classified as 'Typical Degrowthers,' being likely to engage in sufficiency to some extent but most supportive of eco-social policy initiatives.

Taken together, the LCM results provides further evidence in favour of H1, suggesting that engagement in sufficiency behaviours is associated with reduced support for the Status Quo and greater support for specific degrowth policies, exemplified through Typical Degrowthers. However, results for Dedicated Environmentalists suggest that

Table 4
MNL & RPL Results with and without Sufficiency Engagement Interactions.

	Without Interaction				With Interaction	
	(1)	(2)	(3)	(4)	(5)
Dependent Variable: Choice	MNL (Coeff)	RPL (Coeff)	RPL (SD)	RPL (Coeff)	RPL (SD)
Status Quo	−0.421 ***	−3.068 ***	4.073 ***	−2.065 ***	3.91 ***
	(0.112)	(0.231)	(0.268)	(0.294)	(0.319)
Work Time	0.07 ***	0.062 **	0.376 ***	0.041	0.377 ***
	(0.018)	(0.024)	(0.036)	(0.025)	(0.038)
Resource Limits	−0.146 ***	−0.215 ***	0.516 ***	−0.361 ***	0.507 ***
	(0.029)	(0.038)	(0.061)	(0.063)	(0.065)
Ad Limits	−0.036	−0.05 **	0.058	−0.126 ***	0.032
	(0.026)	(0.025)	(0.088)	(0.044)	(0.035)
Health Insurance	0.201 ***	0.205 ***	0.778 ***	0.184 ***	0.818 ***
	(0.033)	(0.041)	(0.059)	(0.045)	(0.071)
Emissions	0.049 ***	0.057 ***	−0.272 ***	0.094 **	0.286 ***
	(0.017)	(0.021)	(0.041)	(0.041)	(0.048)
Taxes	−0.154 ***	−2.75 ***	2.389 ***	−1.921 ***	1.571 ***
	(0.02)	(0.26)	(0.135)	(0.236)	(0.136)
Status Quo x Sufficiency				−1.768 ***	
				(0.409)	
Work Time x Sufficiency				0.033	
				(0.057)	
Resource Limits x Sufficiency				0.27 ***	
				(0.092)	
Ad Limits x Sufficiency				0.146 **	
				(0.058)	
Health Insurance x Sufficiency				0.03	
				(0.06)	
Emissions x Sufficiency				−0.079	
				(0.06)	
Taxes x Sufficiency				0.116 **	
				(0.053)	
N	1012	1012	–	1012	–
Pseudo R^2	0.02	0.27	–	0.27	
Log Likelihood	−8625.27	−6446.45	–	−6416.2	–
AIC	17,264.53	12,920.90	–	12,874.5	–
BIC	17,313.48	13,018.79	–	13,021.3	–

Notes: This table displays results from multinomial and random parameters logit models. Robust standard errors are reported in parentheses. Columns (1), (2), and (3) show results without any interactions. Columns (4) and (5) show the results of an RPL with an interaction for sufficiency engagement. Columns (3) and (5) show the standard deviations associated with the RPL model in the preceding columns. 500 inter-person Halton draws were used for the RPL. "*" = $p < .1$, "**" = $p < .05$, and "***" = $p < .01$.

engagement in sufficiency behaviour may be most closely linked with support for fossil fuel caps.

To provide a more detailed breakdown of characteristics for each class, we conducted an exploratory analysis using the probabilities of class allocation for each respondent, for example as done in Rulleau (2023). We further conducted *t*-tests to compare the mean values of each covariate by class. See the **Supplementary Materials Section F** for these results. The findings provide some preliminary evidence of the differences between Dedicated Environmentalists and Typical Degrowthers based on socio-demographics and values, suggesting that in addition to more stable employment, Typical Degrowthers had significantly higher incomes, higher educational attainment and held more progressive political, social and environmental values.

4.4. Framing treatment results

To test H2 related to the treatment effect, we ran an MNL and RPL interacting each attribute with the treatment variable. The RPL results in Table 6 (columns 2 & 3) suggest that exposure to the framing treatment only had a significant influence on a participant's choice of healthcare policy, but did not significantly influence any other attributes. That is, those in the Degrowth condition were more likely to choose universal healthcare over an expansion of Medicaid at the 5 % significance level. Column (1) displays the simpler MNL model, where there were no significant interaction effects. Taken together, there is only limited evidence in favour of H2, related to the healthcare attribute.

4.5. Goodness of fit & robustness checks

Appendix D compares goodness of fit across all models. The RPL model with an interaction for sufficiency behaviours (Table 4) appears to be the best fit model from a statistical standpoint. From a substantive perspective, LCM-3 with covariates is our preferred model.

We performed several robustness checks to probe the stability of these models. For the RPL, we estimated the model with a higher number of inter-person Halton-draws (i.e., 1000). We also ran two specifications dropping low and high income respondents, respectively. These can all be found in **Appendix E.** For the LCM, we additionally ran a model using estimates from the MNL as starting values, as well as a 4-class model estimation with covariates (see **Appendix F**). For the most part, the results confirm the robustness and general trends of our findings.

5. Discussion & conclusions

5.1. Discussion

We designed a discrete choice experiment with a U.S. sample to examine preferences for specific proposals of degrowth policies and their association with individual sufficiency practices. Particular care was placed in the development of the choice experiment, with an initial qualitative stage followed by a multi-stage update of the choice experiment combinations.

The results from our experiment imply not just an appetite for eco-

Table 5
Latent Class Model Results (3 Classes and Covariates).

Variable	Class A 'Dedicated Environmentalists'		Class B 'Opponents'		Class C 'Typical Degrowthers'	
Status Quo	−1.19	***	2.16	**	−3.02	***
	(0.31)		(0.86)		(0.27)	
Work Time	−0.01		−0.27		0.09	***
	(0.05)		(0.18)		(0.02)	
Resource Limits	−0.29	***	0.16		−0.11	***
	(0.08)		(0.34)		(0.04)	
Ad Limits	−0.06		−0.38		−0.02	
	(0.08)		(0.33)		(0.03)	
Health Insurance	−0.01		0.05		0.25	***
	(0.1)		(0.4)		(0.05)	
Emissions	−0.01		−0.34		0.07	***
	(0.05)		(0.26)		(0.02)	
Taxes	−0.30	***	−0.28		−0.12	***
	(0.06)		(0.21)		(0.03)	
Class Membership Function						
Constant	0.78		–		2.07	***
	(0.73)		–		(0.59)	
Sufficiency	0.70	***	–		0.45	**
	(0.24)		–		(0.2)	
Education	−0.14		–		−0.26	
	(0.24)		–		(0.19)	
Employment	−0.32	*	–		−0.30	**
	(0.18)		–		(0.14)	
Age	0.06		–		0.06	
	(0.25)		–		(0.19)	
Mean Probability	0.21		0.18		0.61	
N	1012		–		–	
Pseudo Rˆ2	0.25		–		–	
Log Likelihood	−6574.39		–		–	
AIC	13,210.79		–		–	
BIC	13,427.54		–		–	

Notes: Robust standard errors are reported in parentheses. Class B is the reference group. Employment was split into three categories, (1) "Unemployed" for those retired or not in work, (2) "Alternatively Employed" for students and caregivers, and (3) "Employed" for full-time, part-time or self-employment. Age was simplified into two categories, under 42 representing Gen Z and Millennials, and over 42, representing Gen X and older. Education was split by with and without a college degree. "*" = p < .1, "**" = p < .05, and "***" = p < .01.

social policy change in the United States, but in some cases the desire for quite ambitious departures from the status quo in line with degrowth's objectives. On average, our sample preferred a resource cap to a full ban, and advertising limits only in public spaces as opposed to general bans. However, respondents on average preferred the shortest work weeks to longer ones, and universal coverage for health insurance instead of an incremental expansion of Medicaid. They were also typically sensitive to taxes,[19] which is assumed in a DCE based on standard economic theory and consistent with climate policy acceptability literature (Brannlund and Persson, 2012; Fanghella et al., 2023; Gevrek and Uyduranoglu, 2015). However, they generally preferred more ambitious emissions reduction targets for faster climate mitigation. Such findings might be surprising given the political landscape in the United States and the centrist skew of our respondents.

Whilst we cannot compare these results directly to prior studies using Likert scales, they may appear more positive than previous research in this area. For example, Khan et al. (2023) found on average more negative assessments (i.e., "quite bad" or "very bad") of other degrowth policies including maximum income caps, basic income, and meat taxes amongst a Swedish sample. However, their respondents found WTR most favourable. And whereas their study presented discrete "welfare policy proposals", our policies were presented as a package focused more on improving quality of life, whilst downscaling the economy's reliance on fossil fuels. The policies most concerned with improving quality of life, i.e., WTR and healthcare, were likely viewed as less coercive than policies related to wealth redistribution (e.g., wealth tax) or penalties on consumption (e.g., meat tax) from Khan et al. (2023). And while there are very few existing policies limiting advertising,[20] WTR and free healthcare might have seemed more feasible given precedents within existing firms and other countries (Darrudi et al., 2022; Stewart, 2023).

Across all of our specifications, there appears a significant positive association between engagement in sufficiency behaviours and support for some form of fossil fuel restrictions, providing the strongest evidence in favour of H1. Results from the RPL model showed that engaging in sufficiency behaviours was associated with preference for a fossil fuel ban over a cap. The LCM further indicated that the association between behaviour and support for some fossil fuel restrictions was relevant for the majority of our sample, over 80 % (Classes A and C). Though not a causal relationship, these results provide the first empirical evidence linking sufficiency behaviours with support for any degrowth-relevant policies, providing some encouraging justification for the transformation pathway (Kallis et al., 2020).

However, results from our latent class model provide a more nuanced picture of the link between sufficiency and support for eco-social degrowth policies that are less ecologically focused. Comparing policy preferences by class indicates that sufficiency engagement may be

[19] See **Supplementary Materials** for further analysis showing how income has no significant impact on the tax attribute and other policy preferences, except for the Status Quo.

[20] As mentioned in **Section 2.1**, the Dutch city of Haarlem passed a ban on meat advertisements in public (Boffey, 2022), whilst France's lower house voted in favour of a bill banning advertising of fast fashion companies (Symons, 2024).

Table 6
MNL & RPL Model Results with Framing Treatment Interactions.

	(1)		(2)		(3)	
Dependent Variable: Choice	**MNL (Coeff)**		**RPL (Coeff)**		**RPL (SD)**	
Status Quo	−0.353	**	−2.666	***	2.499	***
	(0.162)		(0.502)		(0.27)	
Work Time	0.052	**	0.036		0.38	***
	(0.026)		(0.109)		(0.047)	
Resource Limits	−0.163	***	−0.216	***	−0.48	***
	(0.044)		(0.058)		(0.061)	
Ad Limits	−0.03		−0.046	*	−0.11	
	(0.036)		(0.024)		(0.254)	
Health Insurance	0.191	***	0.212	***	0.745	***
	(0.048)		(0.058)		(0.06)	
Emissions	0.05	*	0.048	***	−0.269	***
	(0.026)		(0.016)		(0.047)	
Taxes	−0.146	***	−3.035	***	3.932	***
	(0.03)		(0.436)		(0.365)	
Status Quo x Treatment	−0.138		−0.622		–	
	(0.225)		(0.91)		–	
Work Time x Treatment	0.034		0.046		–	
	(0.036)		(0.205)		–	
Resource Limits x Treatment	0.032		0.013		–	
	(0.059)		(0.041)		–	
Ad Limits x Treatment	−0.011		−0.009		–	
	(0.051)		(0.023)		–	
Health Insurance x Treatment	0.021		0.013	**	–	
	(0.066)		(0.005)		–	
Emissions x Treatment	−0.002		0.007		–	
	(0.035)		(0.01)		–	
Taxes x Treatment	−0.014		0.008		–	
	(0.041)		(0.018)		–	
N	1012		1012		–	
Pseudo R^2	0.02		0.27		–	
Log Likelihood	−8613.50		−6439.99		–	
AIC	17,254.99		12,921.97		–	
BIC	17,352.88		13,068.81		–	

Notes: This table displays results from multinomial and random parameters logit models, interacting each attribute with the treatment variable. Robust standard errors are reported in parentheses. Column (3) shows the standard deviations associated with the RPL model and its coefficients, displayed in Column (2). 500 inter-person Halton Draws were used for the RPL. The treatment variable is a binary variable for (0) control or (1) treatment. "*" = $p < .1$, "**" = $p < .05$, and "***" = $p < .01$.

associated with greater support for substantial WTR and universal healthcare (i.e., for Typical Degrowthers), but this was not the case for the class with the highest likelihood of sufficiency engagement (i.e., Dedicated Environmentalists). While Typical Degrowthers represented the largest group in our sample at 60 %, our preliminary exploration in the individual probability analysis (see **Supplementary Materials Section F**) suggests that they may have more socio-economic privilege and hold more progressive values than Dedicated Environmentalists. Therefore, the latent class model provides further evidence in favour of H1 for advancing fossil fuel restrictions. However, it also uncovers how this pathway may be less viable as a general strategy when considering a wider range of eco-social policies that advance degrowth's socially oriented objectives amongst a more inclusive audience.

Finally, the only significant difference in policy preferences between the Degrowth and Neutral framing conditions, i.e., H2, was related to the healthcare attribute. Whilst both groups were introduced to the link between social and ecological crises, the Degrowth group was provided much more detail on the negative psychological and social impacts of excessive consumption and their connection to ecological crises. Their intro text suggested that policy cannot focus solely on solving the climate crisis, but must tackle the interlinked crises of our time (i.e., "*Research also suggests this crisis cannot be solved by simply focusing on the climate, but rather requires a reorientation of society, enabled through policy change.*"). Their stimuli further emphasised the importance of improving human wellbeing and quality of life, which relate closely to one's health. It is possible that this focus made the Degrowth group relatively more open to universal healthcare as a necessary means of combatting the social and ecological crises, leading to a significant difference for the healthcare attribute.

The otherwise insignificant results for the framing treatment suggest that including an introduction to these policies that is explicitly critical of economic growth and its consequences did not elicit protest responses or a significant preference for the Status Quo. Both versions of our experimental stimuli linked social and ecological crises, which may have been more salient than the degrowth treatment's societal transformation component, leading to null effects for most attributes. Insignificance may also be due to the sample demographics, e.g., the substantially higher proportion of bachelor's degrees than the U.S. population, as higher levels of education are associated with greater support for post-growth values (Paulson and Büchs, 2022). However, it is not likely due to the sample's political ideology, given the centrist and even right-leaning skew of our sample. While recent work suggests that two-thirds of the United States support more market-oriented climate policy (e.g., tax incentives, see Tyson and Kennedy, 2020) and developing renewables (Tyson et al., 2023), this study offers some of the first evidence of support for degrowth oriented climate policies as well.

5.2. Implications and future directions

While our findings might imply that promoting individual sufficiency behaviours could be a pathway toward greater policy support, these findings should not distract from the need for institutional change by individualising the climate crisis or blocking more transformative changes (Lamb et al., 2020). For example, the literature on curtailment behaviours, i.e., habitual energy savings practices, may suggest the importance of private companies in developing market-based solutions for promoting voluntary curtailment (e.g., Testa et al., 2016). However, others suggest that income is negatively correlated with curtailment behaviour (Umit et al., 2019), putting the onus on lower income individuals to engage in sufficiency and curtailment. Literature suggests that voluntary sufficiency may be less accessible, or performed out of necessity instead of voluntarily, for lower income groups (e.g., Heindl and Kanschik, 2016).

Our findings build upon prior work suggesting that personal beliefs about climate change can lead to greater environmental policy support, though this effect is reduced for individuals with lower SES backgrounds (Eom et al., 2018). In our latent class model, sufficiency engagement was significantly higher amongst both Dedicated Environmentalists and Typical Degrowthers than the Opposed group. However, these two sufficiency-oriented groups exhibited different levels of socio-economic privilege. The preliminary evidence from the individual probability analysis might suggest that the link between sufficiency behaviours and policy support (beyond fossil fuel restrictions) is at least partially a function of one's socio-economic privilege. Eom et al. (2018) determined that the difference in policy support by SES was due in part to one's sense of control over life's outcomes. Therefore, the lower policy support amongst Dedicated Environmentalists may be due to their reduced resource availability and resulting lower sense of control.

Instead of promoting privatised behaviour change strategies, we believe a more effective, equitable, and popular strategy is to adopt policies targeting the source of high-emissions energy provisioning in the first place. In line with Kallis et al. (2020), sufficiency and other behavioural patterns should only be explored to the extent that they facilitate transforming the system, rather than undermining such changes. What's more, more work is needed to determine which specific sufficiency behaviours are more or less conducive to such transformations.

Rigorous and consistent support for fossil fuel caps or bans, amongst sufficiency-oriented individuals as well as the general sample, suggests a

strong mandate from the U.S. public for tackling fossil fuels. This is perhaps the highest priority policy area within our package given its consistent support. Though fossil fuel production has continued to rise in the United States (Milman, 2023), we hope this study will contribute to mounting evidence of the public demand for dismantling this industry (McCarthy, 2019) by testing different policy mechanisms.

Considering respondent preferences for a phase-out method over immediate bans, policymakers could seek to prioritise proposals that gradually but stringently impose restrictions on annual fossil fuel production. The preference for a more cautious approach amongst respondents might be due to an awareness of the negative side-effects of ending fossil fuel production, including economic and labour-force concerns (e.g., McCarthy, 2019). To ensure an eco-social and just energy transition when designing fossil fuel phase-out policies, policymakers should not merely focus on ecological impacts, but address employment and mental health impacts on industry workers that are often overlooked (Buch-Hansen and Nesterova, 2023). Along with annual declining caps, this might include a suite of other policy provisions such as funded retraining, universal basic income or extended unemployment benefit opportunities, and/or jobs guarantee programmes (for socially and ecologically meaningful jobs) for fossil fuel workers to manage the downscaling of this industry (e.g., Johnson, 2024).

As the second highest priority policy area based on our results, American policymakers should also pursue universal healthcare in tandem with fossil fuel restrictions. The link between these two policy areas has been noted when considering how to prioritise climate policy funding, such that funding should be diverted away from fossil fuel subsidies and toward funding universal healthcare programs (Salas and Jha, 2019). However, this step is also essential for making healthcare access independent from paid employment, which would provide security for those transitioning away from ecologically damaging industries like fossil fuels (Gazmararian, 2024). It might allow people to pursue other jobs or training programs with less generous health benefits for themselves and their families.

In terms of framing degrowth policies, our results may imply that even if the word degrowth and loss-oriented framing of the agenda may elicit less favourable reactions (Drews and Antal, 2016; Drews and Reese, 2018; Krpan and Basso, 2021a; Tomaselli et al., 2021), aligning policy messaging with degrowth's core values is not as divisive. If anything, depicting the link between ecological and social crises, and emphasising the importance of wellbeing, may even spur greater support for social policies like universal healthcare. Future work can test how different narratives and frames of degrowth's objectives, and even the policies themselves, may further enhance policy support, e.g., by inducing hope (e.g., Tomaselli et al., 2021).

Future work should explore the role of voluntary sufficiency behaviours in garnering degrowth policy support amongst more affluent individuals. Reducing this segment's consumption is necessary given the staggering emissions associated with affluence (Wiedmann et al., 2020), especially in the Global North (Hickel, 2020b, 2021). Broader adoption of sufficiency lifestyles amongst more affluent groups could accelerate a transition to degrowth, as their visibility and influence could facilitate a shift in values and cultural norms (Gurtner and Moser, 2024; Wiedmann et al., 2020).

Given the robust evidence in favour of H1 for fossil fuel policies, the focus on sufficiency might also be practical for developing support for specific ecological policies across a wide range of actors, including those with different political leanings and levels of status. For example, policymakers or campaigners for fossil fuel restrictions might partner with groups advocating for sufficiency related activities (e.g., organisations combatting food waste or promoting cycling). Messaging campaigns, targeted at the point of engaging in sufficiency behaviours (e.g., diverting food waste in canteens or at bike repair stations), could advocate for policies on capping fossil fuels. This approach would promote policy support within the context of sufficiency, increasing the potential for positive spillover between the behaviours by establishing their consistency (Maki et al., 2019). However, future work should test more directly whether targeting sufficiency behaviour may actually undermine support for socially oriented degrowth policies, such as universal basic services.

Returning to the point on accessibility, future research should explore how people who already consume less, and not voluntarily, perceive eco-social degrowth policies. Considering our results for WTR provides some preliminary insight. Given that the work arrangements of Typical Degrowthers were more secure, they may have preferred ambitious WTR policies for a better work life balance, suggesting a self-interested motive (e.g., Fanghella et al., 2023; Khan et al., 2023). However, considering the less stable employment of Dedicated Environmentalists, working less without earning less may be viewed as a luxury reserved for those with steady employment (e.g., Pickup, 2023). While those in stable financial positions may find hope in the utopian future that degrowth policies promise (e.g., Tomaselli et al., 2021), those who are financially insecure may have a heightened sense of the immediate negative consequences of a degrowth transition (Goldsmith et al., 2020; Mullainathan and Shafir, 2013; Sheehy-Skeffington, 2020), such as losing jobs in polluting industries (e.g., Buch-Hansen and Nesterova, 2023).

More generally, whilst the policies we included, especially reducing working hours without reducing pay and public access to health insurance, are designed to ensure a better minimum standard of living and to protect disadvantaged groups (Fitzpatrick et al., 2022; Paulson and Büchs, 2022), they may not be perceived as favourably by these demographics. That is, these policies may instil fear or financial uncertainty, or appear politically infeasible (e.g., Khan et al., 2023). What's more, policies aimed at reducing influences to overconsume (e.g., advertising restrictions) may come into conflict with aspirations of class mobility (e.g., the "American Dream") (e.g., Bliss, 2018). This conflict may be particularly strong for those who are lower SES, immigrants, and non-white, which often intersect, who may view traditional capitalist values of property ownership and accumulation as a means of increasing status, assimilation or racial uplift (Claytor, 2021; Eunjung Kwak and Sojka, 2010; Rucker and Galinsky, 2008; Wang et al., 2022). The relationship between ecological impact, sufficiency behaviour, perceived worries and aspirations of different socio-demographic groups requires further disentangling. This line of inquiry also echoes recent calls for more direct engagement with class struggle to align degrowth with adjacent political movements in facilitating a wider reach (e.g., Löwy et al., 2022).

Although we attempted to use a representative sample, by age, gender and region, we were unable to recruit a sample that was racially or ethnically representative of the U.S. population without maintaining the use of quotas. Whilst a more racially and ethnically diverse group may have exhibited greater sufficiency engagement, e.g., due to collectivist values (e.g., Segev, 2015), it is difficult to speculate how each individual demographic factor may have influenced our sample in isolation without being reductive. However, the overrepresentation of older respondents, and the centrist and slightly right-leaning skew of the sample may have biased our policy support results downward. Future work should prioritise more racially and ethnically diverse samples to ensure policies take into account a more inclusive range of perspectives and lived experiences.

The nature of the DCE prohibited us from selecting policies a) that would directly influence a participant's income level, such as a universal basic or care income (Dengler, 2024; Kallis et al., 2020), or b) that would not impact all participants, such as wealth taxes (Johnston et al., 2017). Exploring a larger set of policies, including those that would directly influence a participant's income, may provide more insight especially regarding differences by income level. Additionally, based on Modern Monetary Theory, proposals have called for greater public spending to fund social and ecological policy (e.g., see Olk et al., 2023), as opposed to the taxes we used to make the DCE consequential (Johnston et al., 2017). As the tax attribute may create a lower bound of policy support,

future work should explore ways to probe preferences for policies that are funded through alternative means. While we focused on comparing the popularity of various specifications of a given policy within a degrowth policy package, this approach limited our ability to disentangle and compare preferences for different policy measures. Future research could use the DCE methodology to determine which policy instruments are more or less popular in isolation (e.g., as done in Faure et al., 2022).

While we used a treatment variable to establish a causal effect of policy framing, we could not capture the causal relationship between sufficiency and policy preferences. Experimentally manipulating sufficiency behaviours, for example by making past sufficiency behaviours more salient through a recall task (e.g., see Lin and Chang, 2017), may be useful for causally investigating if and when sufficiency behaviours may be relevant. Future research should also explore means of amplifying the social impact of an individual's sufficiency practices (e.g., by building a common sense of simple living), the impact on other forms political engagement, such as activism, and whether the transformation pathway is viable for other behaviours and practices, such as engaging in community activities (Kallis et al., 2020).

More generally, a discrete choice experiment has its limitations when applied to degrowth research, as the method is rooted in neoclassical economic theories, e.g., random utility maximization. The underlying theory and DCE design incorporate assumptions about human behaviour, such as the insatiability of demand and maximization of utility (Jackson et al., 2004), that directly oppose the heterodox underpinnings of degrowth (Kallis et al., 2018). While we acknowledge criticisms, we still believe the DCE methodology offers a rigorous starting point for understanding policy preferences more systematically. We hope this research encourages subsequent work using alternative methods that overcome these assumptions.

Our research uncovers new insights about how engaging in sufficiency behaviours may be an avenue for unlocking greater support for fossil fuel restriction policies. However, this pathway is less clear for socially oriented policy goals, including reducing work time, limiting advertising of high emissions goods, and providing universal basic services such as healthcare. Ultimately, more rigorous work is needed before this strategy is employed as a means of garnering broader support for degrowth, especially amongst those who could benefit most from the transformational change it promises.

6. Transparent changes from pre-registration

1. Description of change: Below is a summary of how our pre-registered hypotheses have been changed, edited, or excluded in this paper from.

Pre-registered Hypothesis	Update	Description
H1 (non-directional): Exposure to the degrowth background information treatment will influence willingness to pay for all attributes.	H2: Exposure to the degrowth background information treatment will influence policy support for all degrowth policy attributes compared to the Status Quo.	We use "support for policy attributes" as opposed to "WTP" to generalise the results, which might include both utility coefficient values and willingness to pay estimates. As we don't include WTP in this paper, based on reviewer feedback, we wanted to be more accurate about our model specifications.
H2a (directional): Political ideology will significantly predict WTP for all attributes, such that being further to the left will increase WTP.	Exploratory analyses related to individual differences (see Section 4.4 & **Supplementary Materials Section F**)	Instead of focusing solely on political ideology or universalism values for this paper, we decided to look at a broader range of socio-demographic and individual characteristics.
H2b (directional): Political ideology will significantly predict WTP for all attributes, such that being further to the right will reduce WTP.		We also focused on how these factors differ when examining the link between sufficiency and policy support specifically, and not for policy support in general. This was done to constrain the focus of the paper, for the sake of simplicity, coherence, and length.
H7(directional): Universalism values (nature, concern) will significantly predict WTP for all attributes.		
H3 (directional): The effect of the background information treatment on WTP for attributes will be moderated by political ideology.	Included in **Supplementary Materials Section G**	Given that the treatment variable had an insignificant impact on policy preferences, we did not include related analysis on moderating effects in the main text. However, we have made it available for reference in the **Supplementary Materials**, to show that there is no significant interaction effect.
H4 (directional): Self-reported engagement in deconsumption behaviours will increase WTP for all attributes.	H1: Self-reported engagement in sufficiency behaviours will increase policy support for all degrowth policy attributes compared to the Status Quo.	First, we changed the word "deconsumption" to sufficiency, to better speak to the expanding literature on sufficiency. This is merely superficial and does not change the substance of the hypothesis or associated analyses. Second, we use "support for policy attributes" as opposed to "WTP" to generalise the results, which might include both utility coefficient values and willingness to pay estimates. As we don't include WTP in this paper, based on reviewer feedback, we wanted to be more accurate about our model specifications.
H5(directional): Policy consequentiality beliefs will increase WTP.	Included in **Supplementary Materials Section I**	To streamline information presented in the main body of the paper, we have included this in the **Supplementary Materials**. We included this hypothesis to ensure validity of our experiment, but it is considered a robustness check as opposed to a main analysis.
H6(directional): Pay consequentiality beliefs will increase WTP.	Included in **Supplementary Materials I**	To streamline information presented in the main body of the paper, we have included this in the **Supplementary Materials**. We included this hypothesis to ensure validity of our experiment, but it is considered a robustness check as opposed to a main analysis.

a. Rationale: We have altered the hypotheses section of our pre-registration following analysis of the data for two main reasons. First, our hypotheses were pre-registered by the lead researcher, before having ever undertaken data analysis of a discrete choice experiment before. This resulted in some misspecifications, including specifying WTP instead of policy attribute preferences. Second, while the pre-registration was conducted for one comprehensive project, the scope of findings was far too much for any single academic journal article.
b. Effect of change on study results: These changes do indeed alter the focus of the study and the resulting findings presented. However, we view these changes as mostly narrowing or broadening the scope rather than affecting the analyses conducted or the nature of their results. For example, the results associated with our original H2a, H2b, and H7 are to some extent contained in the results associated with our exploratory analysis of individual characteristics (Section 4.4 & **Supplementary Materials Section F**). We have also made all results associated with other excluded hypotheses available in the **Supplementary Materials**.

2. Description of change: In our analysis plan, and as referred in our original hypotheses, we planned to analyse average willingness to pay for each policy attribute. For simplicity and other issues outlined below, we have decided to exclude willingness to pay calculations altogether.
   a. Rationale: Willingness to pay is not necessarily reported for every specification included in papers using a DCE (e.g., see Faure et al., 2022). Willingness to pay may also not be the most reliable measure for decisions that are unusual or uncommon to respondents. Therefore, including WTP estimates may be arbitrary or even misleading. Reviewer feedback suggested that we exclude any WTP estimates.
   b. Effect of change on study results: We do not believe this has any direct effect on the results, but rather reduces the amount of information provided. This may also slightly reduce the interpretability of our findings, which can be easier with monetary values, but also reduces the volume of information for readers to process.
3. Description of change: We pre-registered a hypothesis related to the sufficiency (deconsumption) behaviours measure (i.e., H4 in our pre-registration, H1 in the current paper), but we did not specify in our analysis plan how we would test it. We instead specified that we would include an LCM with the framing treatment variable as a covariate. With choice data, the main way to test for group differences would be to include a variable as an interaction effect, so an MNL or RPL with interaction was somewhat implied by our hypothesis. However, we further chose to use the LCM model interacting sufficiency and other covariates.
   a. Rationale: At the time of pre-registration, we were unsure of how best to test this effect, and instead focused on pre-registering the differences by treatment group. Given the significant interactions obtained in the RPL with sufficiency interaction, and the lack of significance associated with the treatment effect, we wanted to further explore the heterogeneity based on sufficiency engagement using a different model that provided additional context. We thus ran the LCM including sufficiency engagement as a covariate.
   b. Effect of change on study results: By introducing the additional LCM analysis with sufficiency engagement, we do raise the risk of Type I error. This is why we have noted that this analysis is exploratory and used a stricter significance criterion. Our chosen methods for analysis, that is, using a binary interaction in both RPL and LCM specifications, also influences the results by making the differences in sufficiency less granular. This could increase the risk of Type I error compared to using a continuous measure, as significant effects may be harder to pick up when the differences are more incremental. We also tried a model with the continuous measure of sufficiency, but it resulted in one class with a mean probability of nearly zero (5.747E-13) and ultimately the model did not converge. We also believe the binary measure of engagement and non-engagement is more meaningful for interpretation, in segmenting potential degrowth supporters who do and do not generally practice sufficiency.
4. Description of change: We pre-registered the use of quotas to ensure representativeness, along dimensions of gender, political ideology, age group, and race and ethnicity. However, we had to stop using these quotas during the data recruitment process on the request of the market research firm.
   a. Rationale: The firm collecting our data asked us to end the use of quotas, as they believed they were overly restrictive on their sample and thus excluding too many viable participants.
   b. Effect of change on study results: Abandoning the use of our quotas resulted in a sample that was less representative of the U.S. population than originally desired. Otherwise, we do not believe it changed the nature of our results.

Funding

This work was supported by The London School of Economics and Political Science, including a PhD Summer Research grant from LSE's Phelan United States Centre.

Ethics approval

This study received Research Ethics approval from LSE's Research Ethics Committee prior to data collection, in accordance with the Research Ethics Policy and Code of Research Conduct.

Consent

Informed consent was obtained from all individual participants included in the study.

Pre-registration (anonymized)

https://osf.io/zahsq/?view_only=bc6372fd707f4327ba4742c0ef8c5589

CRediT authorship contribution statement

Dallas O'Dell: Writing – review & editing, Writing – original draft, Visualization, Validation, Software, Resources, Project administration, Methodology, Investigation, Funding acquisition, Formal analysis, Data curation, Conceptualization. **Davide Contu:** Writing – review & editing, Software, Resources, Methodology. **Ganga Shreedhar:** Writing – review & editing, Supervision, Resources, Funding acquisition, Conceptualization.

Declaration of competing interest

The authors have no financial or proprietary interests in any material discussed in this article.

Data availability

The data and programs are available here: https://osf.io/3eafz/?view_only=a308ff12b84f4c35974f1d79db6650de

Acknowledgements

We would like to thank Frédéric Basso and Susana Mourato for their assistance during the design phase of the project. We would also like to thank Giorgos Kallis for his input in conceptualising the behaviour-to-transformation pathway. Finally, we would like to thank two anonymous reviewers for their thoughtful comments and suggestions.

Appendix A. Econometric models – MNL, RPL & LCM

For the Multinomial Logit model (MNL), one assumes that error terms are independently and identically distributed (I.I.D.) to define the random component, using a Gumbel Distribution. The MNL model also implies independence of irrelevant alternatives (IIA) and assumes taste homogeneity across respondents (e.g., Strazzera et al., 2012). The choice probability P for every choice t is represented by A.1, where X is a vector of k attributes in levels, and β is a vector of utility parameters to be estimated.

$$P_{ijt} = \frac{exp\left(\beta_k X'_{kjt}\right)}{\sum_j exp\left(\beta_k X'_{kjt}\right)} \tag{A.1}$$

However, this assumption on preference homogeneity might be considered too restrictive. To overcome this restriction, the RPL relaxes this assumption, allowing for preference heterogeneity (Hensher and Greene, 2003; Revelt and Train, 1998). This model's utility function assumes a continuous distribution, with a mean value β_k and idiosyncratic random deviation η_{ik} for each respondent i and each attribute K:

$$U_{ijt} = \beta_k \dot{X}_{kjt} + \eta_{ik} \dot{X}_{kjt} + \varepsilon_{ijt} \tag{A.2}$$

For the RPL, the choice probability is therefore given by A.3, where $f(\beta_i|\theta)$ represents the density function for the vector of preference parameters β, and allows vector β to follow a random distribution with parameters θ. As the analyst must specify the random distribution, we used a normal distribution for all parameters except tax. We set to this attribute to negative log-normal, as respondents would not prefer higher taxes.

$$P_{ijt} = \int \frac{exp\left(\beta_{ik} X'_{kjt}\right)}{\Sigma_j exp\left(\beta_{ik} X'_{kjt}\right)} f(\beta_i|\theta) d\beta_i \tag{A.3}$$

The RPL requires a simulated maximum likelihood estimation, whereby the researcher must specify the number of draws. This number an influence the stability and precision of results, such that a sufficiently large number of draws is important. Our main models use 500 inter-person Halton-draws, but we ran a robustness check using 1000 draws to check the stability of our results.

Another way of modelling preference heterogeneity is through a latent class model (Boxall and Adamowicz, 2002). This model is useful if preferences can be seen as relatively homogenous within specified groups, but there are greater differences between groups. The LCM provides some benefits over the RPL, in that the researcher does not have to select the distribution function. However, it involves more assumptions on the part of the researcher in specifying the number of classes to model. In the LCM, utility is estimated for distinct classes or groups with the same parameters in each class or segment s, such that there is a utility parameter for each segment:

$$U_{ij|s} = V_{ij|s} + \varepsilon_{ij|s} \tag{A.4}$$

The unconditional choice probability is given by A.5, where $Pr_{j|s}$ is conditional the choice probability based on class membership probability h_s, is the weighted average of all segments' utility parameters:

$$Pr_{ij} = \Sigma_s \, h_s Pr_{j|s} \tag{A.5}$$

$Pr_{j|s}$ and h_s are further specified as follows, where Z_s represents the matrix of selected covariates that predict the segment membership probability.

$$Pr_{j|s} = \frac{exp\left(\beta_{k|s} X'_{kjt}\right)}{\sum_j exp\left(\beta_{k|s} X'_{kjt}\right)} \tag{A.6}$$

$$h_s = \frac{exp(\gamma_s Z_s)}{\Sigma_s exp(\gamma_s Z_s)} \tag{A.7}$$

Each segment's membership probability is estimated using a simple MNL, assuming a logistic distribution. To further contextualise class allocation, h can be conditioned on individual level covariates, including demographics, attitudes, or values collected within the survey (Strazzera et al., 2012). The researcher must also select the relevant covariates for inclusion in the LCM. Given the researcher's control over these covariates, it is important to select individual characteristics that are theoretically relevant (Weller et al., 2020; Wurpts and Geiser, 2014). Membership probabilities can thus be represented as:

$$h_s = \frac{exp(\delta_s W_c)}{\Sigma_{s=1}^{S} exp(\delta_s W_c)} \tag{A.8}$$

where W_c is a vector of c covariates and δ_s is a vector of coefficients for each individual segment s.

Appendix B. Demographic comparison between sample and U.S. general population

Table B.1
Demographic Statistics - Sample vs. U.S. Population.

Demographic	Sample Median	U.S. Population Median
Age	47	38.9
Income	$50,000 - $74,999	$74,580

	Category	Sample %	U.S. Population %
Gender	Female	51.0%	50.4 %
	Male	48.8 %	49.6 %
Race & Ethnicity	Asian	2.2 %	6.3 %
	Black	8.1%	13.6 %
	White	86.3 %	75.5 %
	North American Indigenous	0.9 %	1.3 %
	Native Hawaiian/Pacific Islander	0.1%	0.3 %
	Not otherwise listed	2.5 %	3.0%
	Hispanic	8.5 %	19.1%
Education	High school graduate or higher	97.7 %	89.1%
	Bachelor's degree or higher	52.4 %	34.3 %

Notes: The top panel compares continuous variables, whereas the bottom panel includes categorical variables. Categories were split up depending on availability of U.S. data and may not be as granular as our sample categories (e.g., education). While we recorded participants' gender (i.e., how they identify), we could only find suitable U.S. data on sex. All data on the U.S. population are originally sourced from the U.S. Census Bureau Vintage 2022 dataset. Specific values for race & ethnicity, education, and gender were obtained from the U.S. Census Bureau QuickFacts (2022). Age and income values were obtained from summary webpages, entitled "America is Getting Older" (US Census Bureau, 2022b) and "Income in the United States: 2022" (US Census Bureau, 2022a), respectively.

Appendix C. DCE debrief questions & summary of responses

Payment and policy consequentiality, that is how real or likely participants perceived the payment vehicle (tax) and policy attributes to be, were adapted from Zawojska et al. (2019). See **Supplementary Materials Section I** for analyses associated with these variables. We also asked the importance of each policy theme, and participants' agreement with a degrowth policy agenda – both ecological and social dimensions – without using the word 'degrowth'. We further asked their familiarity with social and ecological issues, their familiarity with the Inflation Reduction Act (i.e., the status quo which was referenced in the scenario), and how they would rate their climate knowledge. The following sub-sections include histograms to show the distribution of responses for each of these debrief questions. See the question wording in each figure label below.

We also asked a question regarding beliefs about the reasons people were in poverty, adapted from Kruse and Atkinson (2022). Participants were asked "In your opinion, which is the bigger cause of poverty today?" with options "People are not doing enough to help themselves out of poverty" and "Circumstances beyond their control cause them to be poor." They could also select "Don't know," which we recoded as missing. See Table 3 (**Section 4.1**) for summary statistics related to poverty beliefs.

Finally, we asked about their climate beliefs ($\alpha = 0.80$), adapted from Kruse and Atkinson (2022) and Zaval et al. (2014). See Table 3 (**Section 4.1**) for summary statistics related to climate beliefs. The following items were averaged to create a composite score (1 = Strongly disagree, 7 = Strongly agree):

1. Climate change is already happening.
2. Climate change is largely caused by nature. [*reverse coded*]
3. Greenhouse Gases such as Carbon Dioxide (CO2) are the main cause of climate change.
4. The rise in Greenhouse Gases such as Carbon Dioxide (CO2) is largely caused by human activities.
5. Our children's generation will be negatively impacted by climate change in the future.

a. **Pay & policy consequentiality**

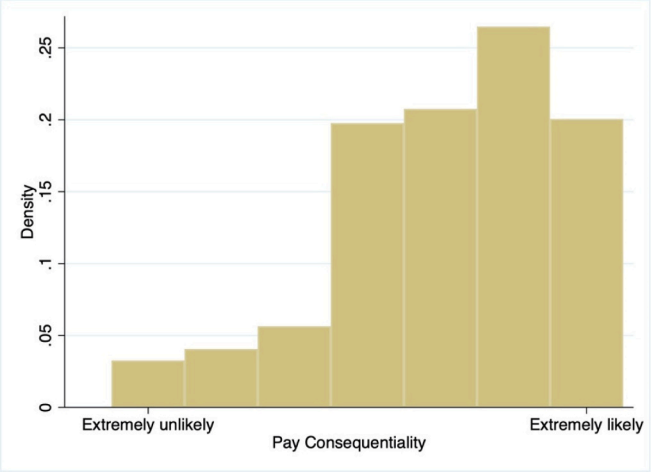


Fig. C.1. "In your view, how likely is it that these policies would influence income tax as described in this survey?"

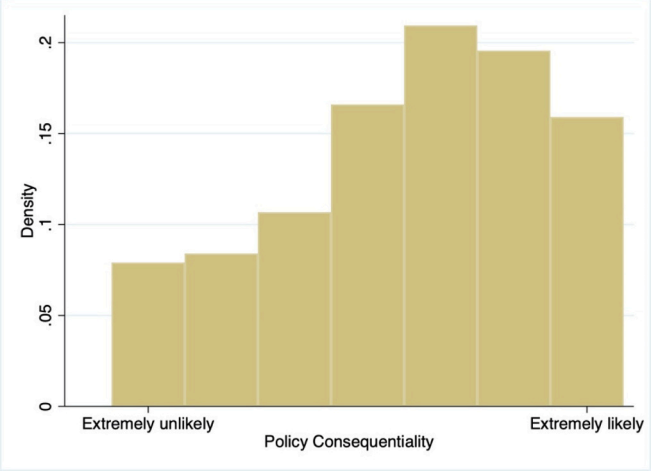


Fig. C.2. "In your view, how likely is it that the US government will enact policies to further reduce emissions and improve standards of living in America in the near future?"

b. **Rating each policy attribute by personal importance**

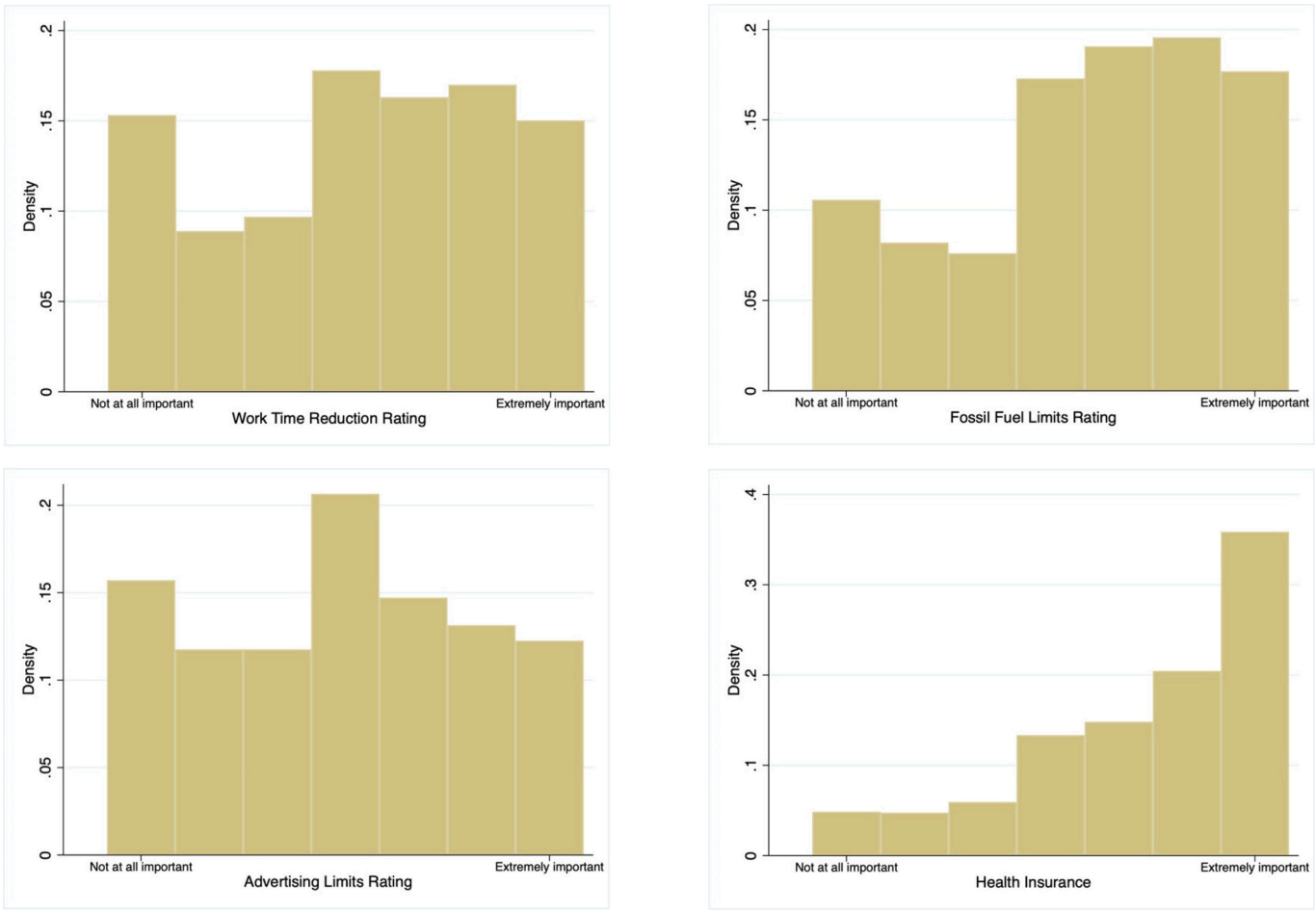


Fig. C.3. "Can you please indicate how important these issues are to you personally, where 1=Not at all important and 7=Extremely important to me."

c. **Agreement with degrowth's ecological policy objectives**

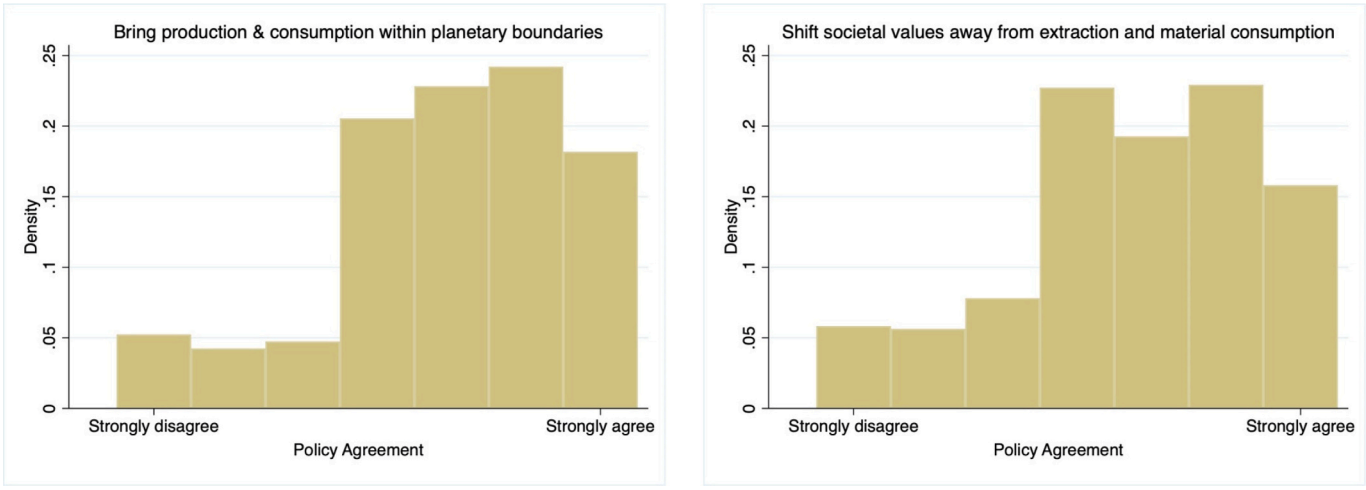


Fig. C.4. "The US government should create policies that:"

d. **Agreement with degrowth's social policy objectives**

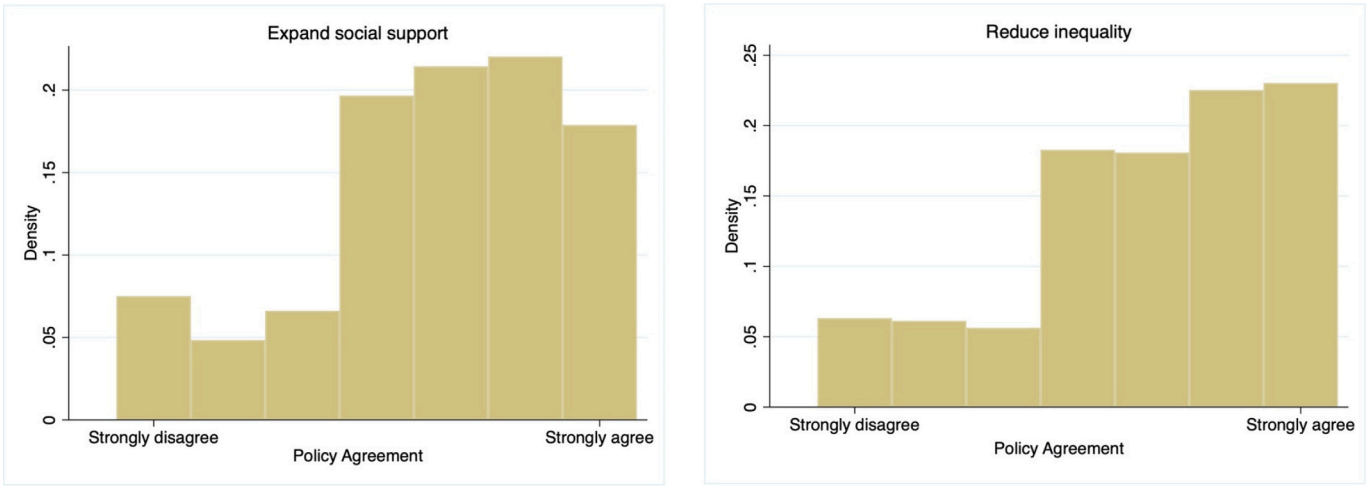


Fig. C.5. "The US government should create policies that:"

e. **Familiarity with social & ecological crisis / Inflation Reduction Act (baseline scenario)**

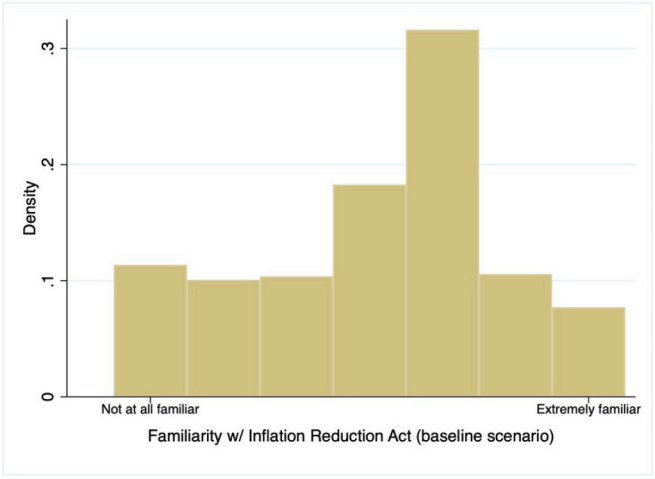


Fig. C.6. "Before reading the text about the new bill, Inflation Reduction Act, which stands to reduce emissions by 40% among other provisions, how familiar were you with this bill?"

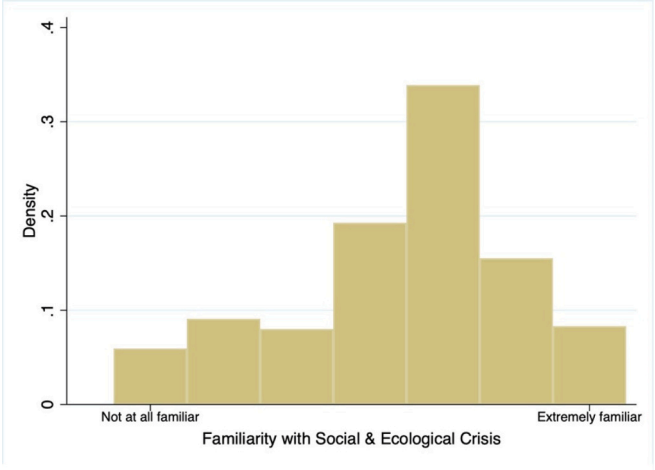


Fig. C.7. "How familiar are you with the issues presented in this study regarding the social and ecological crisis? (e.g., climate change, the Paris Agreement, inequality)".

f. **Climate Knowledge**

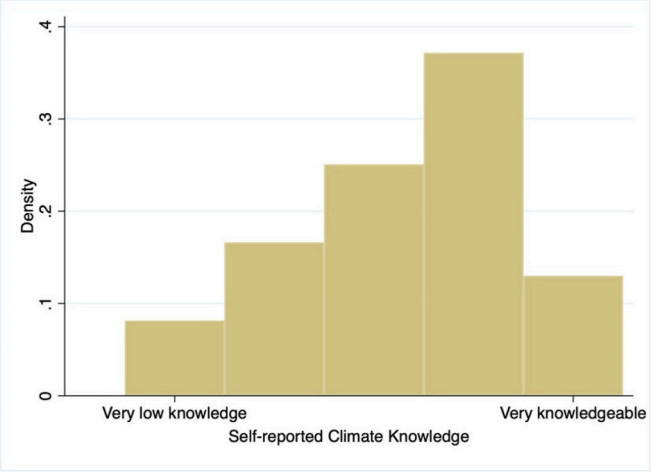


Fig. C.8. "How would you rate your own knowledge about climate change?"

Appendix D. Goodness of fit comparison

Table D.1
Comparing Information Criteria Across Models.

Model Specification	Interaction Variable	AIC	BIC	Pseudo Rˆ2	# Parameters
MNL		17,264.53	17,313.48	0.02	7
MNL w/ interaction	Framing Treatment	17,254.99	17,352.88	0.02	14
RPL		12,920.90	13,018.79	0.27	14
RPL w/ interaction	Sufficiency	12,874.48	13,021.31	0.27	21
RPL w/ interaction	Framing Treatment	12,921.97	13,068.81	0.27	21
LCM-2		13,549.35	13,654.22	0.23	15
LCM-3		13,211.81	13,372.63	0.25	23
LCM-4		13,096.05	13,312.80	0.26	31
LCM-3 (covariates)		13,210.79	13,427.54	0.25	31
LCM-4 (covariates)		13,089.56	13,390.21	0.26	43

Notes: AIC stands for Akaike Information Criterion, and BIC stands for Bayesian Information Criterion. The pseudo Rˆ2 of each model is calculated as 1 - (LL / LL(0)), using adjusted values. The RPL models use 500 inter-person Halton draws. The covariates in the LCM models with covariates are sufficiency, age, education, and employment.

Appendix E. Robustness checks - RPL

Table E.1
Robustness Checks for Random Parameters Logit Model w/ Sufficiency Interaction.

	(1)		**(2)**		**(3)**	
	RPL					
Dependent Variable: Choice	**1 K Halton Draws**		**Dropping Low Income**		**Dropping High Income**	
Panel A: Coefficients						
Status Quo	−2.00	***	2.28	**	1.51	*
	(0.283)		(0.928)		(0.786)	
Work Time	0.04		0.03		−0.03	
	(0.044)		(0.031)		(0.04)	
Resource Limits	−0.34	***	−0.84	***	−0.64	***
	(0.06)		(0.166)		(0.165)	
Ad Limits	−0.13	***	−0.18		−0.10	**
	(0.042)		(0.12)		(0.045)	
Health Insurance	0.19	***	0.45	***	0.29	***
	(0.054)		(0.148)		(0.102)	
Emissions	0.09	**	0.10		0.13	
	(0.046)		(0.07)		(0.114)	
Taxes	−2.03	***	−0.80	**	−0.95	***

(*continued on next page*)

Table E.1 (*continued*)

	(1)		(2)		(3)	
	RPL					
Dependent Variable: Choice	**1 K Halton Draws**		**Dropping Low Income**		**Dropping High Income**	
	(0.421)		(0.325)		(0.188)	
Status Quo x Sufficiency	−2.06	***	−1.38	***	−1.13	***
	(0.536)		(0.239)		(0.185)	
Work Time x Sufficiency	0.04		0.01		0.02	*
	(0.084)		(0.006)		(0.011)	
Resource Limits x Sufficiency	0.24	***	0.14	***	0.10	***
	(0.083)		(0.037)		(0.039)	
Ad Limits x Sufficiency	0.15	**	0.03		0.01	*
	(0.063)		(0.028)		(0.006)	
Health Insurance x Sufficiency	0.03		−0.06	*	−0.02	
	(0.057)		(0.033)		(0.018)	
Emissions x Sufficiency	−0.08		−0.01		−0.02	
	(0.054)		(0.015)		(0.025)	
Taxes x Sufficiency	0.10		0.08	***	0.07	***
	(0.088)		(0.028)		(0.016)	
Panel B: Standard Deviations						
Status Quo	4.18	***	3.99	***	3.87	***
	(0.296)		(0.331)		(0.314)	
Work Time	−0.38	***	0.42	***	0.39	***
	(0.038)		(0.043)		(0.043)	
Resource Limits	0.49	***	−0.46	***	−0.50	***
	(0.063)		(0.079)		(0.078)	
Ad Limits	−0.02		−0.10	*	0.02	
	(0.083)		(0.057)		(0.013)	
Health Insurance	0.80	***	0.76	***	0.79	***
	(0.066)		(0.076)		(0.069)	
Emissions	0.28	***	−0.27	***	0.25	***
	(0.047)		(0.051)		(0.053)	
Taxes	1.62	***	0.90	***	0.97	***
	(0.185)		(0.187)		(0.067)	
N	1012		723		945	
Pseudo Rˆ2	0.27		0.28		0.27	
Log Likelihood	−6415.56		−4524.66		−6016.06	
AIC	12,873.12		9091.32		12,074.11	
BIC	13,019.95		9231.09		12,219.52	

Notes: Column (1) uses a higher number of inter-person Halton draws than our main model to check stability. Column (2) drops participants with incomes less than $35,000. Column (3) drops participants with incomes above $99,999. Otherwise, all details are consistent with the main RPL specification. "*" = $p < .1$, "**" = $p < .05$, and "***" = $p < .01$.

Appendix F. Robustness checks - LCM

Table F.1
Main LCM Model Using Simple MNL as Starting Values.

Variable	Class A		Class B		Class C	
Status Quo	−1.21	***	−11.38	***	1.73	*
	(0.22)		(0.41)		(0.97)	
Work Time	0.00		0.11	***	−0.26	
	(0.04)		(0.03)		(0.16)	
Resource Limits	−0.21	***	−0.12	***	0.08	
	(0.06)		(0.04)		(0.29)	
Ad Limits	0.00		−0.05		−0.35	
	(0.05)		(0.03)		(0.27)	
Health Insurance	0.04		0.29	***	−0.06	
	(0.07)		(0.05)		(0.29)	
Emissions	−0.03		0.09	***	−0.20	
	(0.03)		(0.02)		(0.18)	
Taxes	−0.22	***	−0.12	***	−0.38	*
	(0.04)		(0.03)		(0.21)	
Class Membership Function						
Constant	−0.13		–		−1.58	***
	(0.47)		–		(0.56)	
Sufficiency	0.23		–		−0.42	**
	(0.17)		–		(0.2)	

(*continued on next page*)

Table F.1 (*continued*)

Variable	Class A		Class B		Class C	
Education	0.02		–		0.24	
	(0.17)		–		(0.19)	
Employment	−0.11		–		0.24	*
	(0.12)		–		(0.14)	
Age	−0.12		–		−0.12	
	(0.17)		–		(0.19)	
Mean Probability	0.32		0.50		0.19	
N	1012		–		–	
Pseudo R^2	0.25		–		–	
Log Likelihood	−6586.25		–		–	
AIC	13,234.51		–		–	
BIC	13,451.26		–		–	

Notes: This model uses the parameter estimates for each parameter from a multinomial logit analysis (without any interactions) as the starting values for the attributes in the LCM. All other details are the same as the main LCM specification. Robust standard errors are reported in parentheses. "*" = p < .1, "**" = p < .05, and "***" = p < .01.

Table F.2
Latent Class Model with 4 Classes & Covariates.

Variable	Class A		Class B		Class C		Class D	
Status Quo	−1.04	***	2.15	**	−3.56	***	0.97	
	(0.31)		(0.89)		(0.33)		(1.09)	
Work Time	−0.01		−0.28		0.08	**	0.16	
	(0.05)		(0.19)		(0.04)		(0.17)	
Resource Limits	−0.29	***	0.16		−0.20	***	0.37	**
	(0.08)		(0.37)		(0.05)		(0.17)	
Ad Limits	−0.07		−0.41		−0.02		−0.11	
	(0.08)		(0.35)		(0.04)		(0.16)	
Health Insurance	0.04		0.07		−0.05		1.73	***
	(0.1)		(0.44)		(0.06)		(0.36)	
Emissions	−0.01		−0.38		0.05	*	0.20	*
	(0.05)		(0.28)		(0.03)		(0.12)	
Taxes	−0.30	***	−0.26		−0.17	***	0.09	
	(0.07)		(0.22)		(0.05)		(0.15)	
Class Membership Function								
Constant	0.63		–		1.76	***	1.18	
	(0.74)		–		(0.64)		(0.86)	
Sufficiency	0.70	***	–		0.47	**	0.44	
	(0.25)		–		(0.21)		(0.32)	
Education	−0.15		–		−0.18		−0.56	*
	(0.24)		–		(0.19)		(0.3)	
Employment	−0.30		–		−0.30	**	−0.37	*
	(0.19)		–		(0.15)		(0.22)	
Age	0.09		–		0.06		0.02	
	(0.26)		–		(0.21)		(0.31)	
Mean Probability	0.20		0.18		0.50		0.12	
N	1012		–		–		–	
Pseudo R^2	0.26		–		–		–	
Log Likelihood	−6501.78		–		–		–	
AIC	13,089.56		–		–		–	
BIC	13,390.21		–		–		–	

Notes: Robust standard errors are reported in parentheses. Class B is the reference group. Employment was split into three categories, (1) "Unemployed" for those retired or not in work, (2) "Alternatively Employed" for students and caregivers, and (3) "Employed" for full-time, part-time or self-employment. Age was simplified into two categories, under 42 representing Gen Z and Millennials, and over 42, representing Gen X and older. Education was split by with and without a college degree. "*" = p < .1, "**" = p < .05, and "***" = p < .01.

Appendix G. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.ecolecon.2024.108446.

References

Ahvenharju, S., 2020. Potential for a radical policy-shift? The acceptability of strong sustainable consumption governance among elites. Environ. Politics 29 (1), 134–154. https://doi.org/10.1080/09644016.2019.1688532.

Alcott, B., 2010. Impact caps: why population, affluence and technology strategies should be abandoned. J. Clean. Prod. 18 (6), 552–560. https://doi.org/10.1016/j.jclepro.2009.08.001.

Artry, J., 2022, December 2. 4-Day Work Week Is Better for Business, According to New Study. Tech.Co. https://tech.co/news/4-day-work-week-benefits-study.

Aust, F., Diedenhofen, B., Ullrich, S., Musch, J., 2013. Seriousness checks are useful to improve data validity in online research. Behav. Res. Methods 45 (2), 527–535. https://doi.org/10.3758/s13428-012-0265-2.

Barber, A., 2021. Consumed: The Need for Collective Change; Colonialism, Climate Change & Consumerism. Octopus Books.

Bick, R., 2018. The Global Environmental Injustice of Fast Fashion, p. 4.

Bliss, S., 2018. The incipient degrowth movement in the United States. SSRN Electron. J. https://doi.org/10.2139/ssrn.3236387.
Boffey, D., 2022, September 6. Dutch City Becomes World's First to Ban Meat Adverts in Public. The Guardian. https://www.theguardian.com/world/2022/sep/06/haarlem-netherlands-bans-meat-adverts-public-spaces-climate-crisis.
Boxall, P.C., Adamowicz, W.L., 2002. Understanding heterogeneous preferences in random utility models: A latent class approach. Environ. Resour. Econ. 23 (4), 421–446. https://doi.org/10.1023/A:1021351721619.
Brannlund, R., Persson, L., 2012. To tax, or not to tax: preferences for climate policy attributes. Clim. Pol. 12 (6), 704–721. https://doi.org/10.1080/14693062.2012.675732.
Breines, W., 1989. Community and Organization in the new Left, 1962–1968: The Great Refusal. Rutgers University Press.
Buch-Hansen, H., 2018. The prerequisites for a degrowth paradigm shift: insights from critical political economy. Ecol. Econ. 146, 157–163. https://doi.org/10.1016/j.ecolecon.2017.10.021.
Buch-Hansen, H., Nesterova, I., 2023. Less and more: Conceptualising degrowth transformations. Ecol. Econ. 205, 107731. https://doi.org/10.1016/j.ecolecon.2022.107731.
Carbonaro, G., 2023, March 17. America is Ready for the 4-day Workweek. Newsweek. https://www.newsweek.com/america-ready-4-day-workweek-1788204.
Carlsson, F., Kataria, M., Krupnick, A., Lampi, E., Löfgren, Å., Qin, P., Sterner, T., Yang, X., 2021. The climate decade: changing attitudes on three continents. J. Environ. Econ. Manag. 107, 102426. https://doi.org/10.1016/j.jeem.2021.102426.
ChoiceMetrics, 2014. Ngene 1.1.2 User Manual & Reference Guide. https://scholar-google-com.gate3.library.lse.ac.uk/scholar_lookup?title=Ngene%201.1.2%20User%20Manual%20%26%20Reference%20Guide%2C%20Australia&author=ChoiceMetrics&publication_year=2014.
Claytor, C.P., 2021. Dreaming in black: middle-class Blacks' aspirational consumption. J. Consum. Aff. 55 (2), 483–503. https://doi.org/10.1111/joca.12361.
Climate Assembly UK, 2020. The Path to Net Zero: Climate Assembly UK Full Report. Climate Assembly UK. https://climateassembly.uk/report/read/.
Collins, R.M., 2002. More: The Politics of Economic Growth in Postwar America. Oxford Univ. Press.
Contu, D., Strazzera, E., Mourato, S., 2016. Modeling individual preferences for energy sources: the case of IV generation nuclear energy in Italy. Ecol. Econ. 127, 37–58. https://doi.org/10.1016/j.ecolecon.2016.03.008.
Cosme, I., Santos, R., O'Neill, D.W., 2017. Assessing the degrowth discourse: A review and analysis of academic degrowth policy proposals. J. Clean. Prod. 149, 321–334. https://doi.org/10.1016/j.jclepro.2017.02.016.
Darrudi, A., Khoonsari, M.H.K., Tajvar, M., 2022. Challenges to achieving universal health coverage throughout the world: A systematic review. J. Prev. Med. Public Health 55 (2), 125–133. https://doi.org/10.3961/jpmph.21.542.
Debord, G., 1983. The Society of the Spectacle. Black & Red.
Dengler, C., 2024. Rereading the wages for housework campaign: feminist degrowth reflections on social reproduction, commons, and a care income. Hypatia 1–20. https://doi.org/10.1017/hyp.2024.14.
Drews, S., Antal, M., 2016. Degrowth: A "missile word" that backfires? Ecol. Econ. 126, 182–187. https://doi.org/10.1016/j.ecolecon.2016.04.001.
Drews, S., Reese, G., 2018. "Degrowth" vs. other types of growth: labeling affects emotions but not attitudes. Environ. Commun. 12 (6), 763–772. https://doi.org/10.1080/17524032.2018.1472127.
Drews, S., Savin, I., van den Bergh, J.C.J.M., 2019. Opinion clusters in academic and public debates on growth-vs-environment. Ecol. Econ. 157, 141–155. https://doi.org/10.1016/j.ecolecon.2018.11.012.
Eom, K., Kim, H.S., Sherman, D.K., 2018. Social class, control, and action: socioeconomic status differences in antecedents of support for pro-environmental action. J. Exp. Soc. Psychol. 77, 60–75. https://doi.org/10.1016/j.jesp.2018.03.009.
Eunjung Kwak, L., Sojka, J.Z., 2010. If they could see me now: Immigrants' use of prestige brands to convey status. J. Consum. Mark. 27 (4), 371–380. https://doi.org/10.1108/07363761011052404.
Fanghella, V., Faure, C., Guetlein, M.-C., Schleich, J., 2023. What's in it for me? Self-interest and preferences for distribution of costs and benefits of energy efficiency policies. Ecol. Econ. 204, 107659. https://doi.org/10.1016/j.ecolecon.2022.107659.
Faul, F., Erdfelder, E., Buchner, A., Lang, A.-G., 2009. Statistical power analyses using G*power 3.1: tests for correlation and regression analyses. Behav. Res. Methods 41 (4), 1149–1160. https://doi.org/10.3758/BRM.41.4.1149.
Faure, C., Guetlein, M.-C., Schleich, J., Tu, G., Whitmarsh, L., Whittle, C., 2022. Household acceptability of energy efficiency policies in the European Union: policy characteristics trade-offs and the role of trust in government and environmental identity. Ecol. Econ. 192, 107267. https://doi.org/10.1016/j.ecolecon.2021.107267.
Fitzpatrick, N., Parrique, T., Cosme, I., 2022. Exploring degrowth policy proposals: A systematic mapping with thematic synthesis. J. Clean. Prod. 132764. https://doi.org/10.1016/j.jclepro.2022.132764.
Frost, R., 2021, August 12. Which Countries Have Banned Fossil Fuel Exploration and Extraction? Euronews.Green. https://www.euronews.com/green/2021/08/12/the-end-of-fossil-fuels-which-countries-have-banned-exploration-and-extraction.
Gazmararian, A.F., 2024. Fossil fuel communities support climate policy coupled with just transition assistance. Energy Policy 184, 113880. https://doi.org/10.1016/j.enpol.2023.113880.
Gevrek, Z.E., Uyduranoglu, A., 2015. Public preferences for carbon tax attributes. Ecol. Econ. 118, 186–197. https://doi.org/10.1016/j.ecolecon.2015.07.020.
Goldsmith, K., Griskevicius, V., Hamilton, R., 2020. Scarcity and consumer decision making: Is scarcity a mindset, a threat, a reference point, or a journey? Journal of the Association for Consumer Research 5 (4), 358–364.
Gorz, A., 1997. Farewell to the Working Class: An Essay on Post-Industrial Socialism (4. Impr). Pluto Press.
Gunderson, R., 2018. Degrowth and other quiescent futures: pioneering proponents of an idler society. J. Clean. Prod. 198, 1574–1582. https://doi.org/10.1016/j.jclepro.2018.07.039.
Gurtner, L.M., Moser, S., 2024. The where, how, and who of mitigating climate change: A targeted research agenda for psychology. J. Environ. Psychol. 94, 102250. https://doi.org/10.1016/j.jenvp.2024.102250.
Heindl, P., Kanschik, P., 2016. Ecological sufficiency, individual liberties, and distributive justice: implications for policy making. Ecol. Econ. 126, 42–50. https://doi.org/10.1016/j.ecolecon.2016.03.019.
Hensher, D.A., Greene, W.H., 2003. The mixed logit model: the state of practice. Transportation 30, 133–176.
Hess, S., Palma, D., 2019. Apollo: A flexible, powerful and customisable freeware package for choice model estimation and application. J. Choice Model. 32, 100170. https://doi.org/10.1016/j.jocm.2019.100170.
Hickel, J., 2020a. Less Is More: How Degrowth Will Save the World. Random House.
Hickel, J., 2020b. Quantifying national responsibility for climate breakdown: an equality-based attribution approach for carbon dioxide emissions in excess of the planetary boundary. Lancet Planet. Health 4 (9), e399–e404. https://doi.org/10.1016/S2542-5196(20)30196-0.
Hickel, J., 2021. The anti-colonial politics of degrowth. Polit. Geogr. 88, 102404. https://doi.org/10.1016/j.polgeo.2021.102404.
Hickel, J., Kallis, G., Jackson, T., O'Neill, D.W., Schor, J.B., Steinberger, J.K., Victor, P. A., Ürge-Vorsatz, D., 2022. Degrowth can work—Here's how science can help. Nature 612 (7940), 400–403. https://doi.org/10.1038/d41586-022-04412-x.
Jackson, T., Jager, W., Stagl, S., 2004. Beyond insatiability – Needs theory, consumption and sustainability. In: Reisch, In L., Røpke, I. (Eds.), The Ecological Economics of Consumption. Edward Elgar Publishing, p. 3205. https://doi.org/10.4337/9781845423568.00013.
Johnson, T., 2024, June 27. 65 Climate Organisations Demand Funded Transition Plan for Oil and Gas Industry Workers. New Civil Engineer. https://www.newcivilengineer.com/latest/65-climate-organisations-demand-funded-transition-plan-for-oil-and-gas-industry-workers-27-06-2024/.
Johnston, R.J., Boyle, K.J., Adamowicz, W., Bennett, J., Brouwer, R., Cameron, T.A., Hanemann, W.M., Hanley, N., Ryan, M., Scarpa, R., Tourangeau, R., Vossler, C.A., 2017. Contemporary guidance for stated preference studies. J. Assoc. Environ. Resour. Econ. 4 (2), 319–405. https://doi.org/10.1086/691697.
Joly, J., Hurst, L., Walsh, D., Carbonaro, G., 2024, February 2. Which Countries Are Embracing a 4-Day Workweek and how Is it Going? Euronews. https://www.euronews.com/next/2024/02/02/the-four-day-week-which-countries-have-embraced-it-and-how-s-it-going-so-far.
Jungell-Michelsson, J., Heikkurinen, P., 2022. Sufficiency: A systematic literature review. Ecol. Econ. 195, 107380. https://doi.org/10.1016/j.ecolecon.2022.107380.
Kallis, G., Martinez-Alier, J., 2010. Caps yes, but how? A response to Alcott. J. Clean. Prod. 18 (15), 1570–1573. https://doi.org/10.1016/j.jclepro.2010.06.010.
Kallis, G., Kalush, M., O. 'Flynn, H., Rossiter, J., Ashford, N., 2013. "Friday off": reducing working hours in Europe. Sustainability 5 (4). https://doi.org/10.3390/su5041545. Article 4.
Kallis, G., Kostakis, V., Lange, S., Muraca, B., Paulson, S., Schmelzer, M., 2018. Research on degrowth. Annu. Rev. Environ. Resour. 43 (1), 291–316. https://doi.org/10.1146/annurev-environ-102017-025941.
Kallis, G., Paulson, S., D'Alisa, G., Demaria, F., 2020. The Case for Degrowth. Polity Press.
Kallis, G., Mastini, R., Zografos, C., 2023. Perceptions of degrowth in the European Parliament. Nat. Sustain. https://doi.org/10.1038/s41893-023-01246-x.
Karra, M., Sandoe, E., 2020. A polling experiment on public opinion on the future expansion of Medicare and Medicaid. Health Serv. Res. 55 (4), 578–586. https://doi.org/10.1111/1475-6773.13295.
Kenis, A., Lievens, M., 2015. The Limits of the Green Economy: From Re-Inventing Capitalism to Re-Politicising the Present. Routledge. https://doi.org/10.4324/9781315769707.
Kettle, N.P., Dow, K., 2016. The role of perceived risk, uncertainty, and trust on coastal Climate change adaptation planning. Environ. Behav. 48 (4), 579–606. https://doi.org/10.1177/0013916514551049.
KFF, 2020, October 16. Public Opinion on Single-Payer, National Health Plans, and Expanding Access to Medicare Coverage. KFF. https://www.kff.org/slideshow/public-opinion-on-single-payer-national-health-plans-and-expanding-access-to-medicare-coverage/.
KFF, 2023, December 1. Status of State Medicaid Expansion Decisions: Interactive Map. KFF. https://www.kff.org/medicaid/issue-brief/status-of-state-medicaid-expansion-decisions-interactive-map/.
Khan, J., Emilsson, K., Fritz, M., Koch, M., Hildingsson, R., Johansson, H., 2023. Ecological ceiling and social floor: public support for eco-social policies in Sweden. Sustain. Sci. 18 (3), 1519–1532. https://doi.org/10.1007/s11625-022-01221-z.
Kim, J., Schmöcker, J.-D., Fujii, S., Noland, R.B., 2013. Attitudes towards road pricing and environmental taxation among US and UK students. Transp. Res. A Policy Pract. 48, 50–62. https://doi.org/10.1016/j.tra.2012.10.005.
King, L.C., Savin, I., Drews, S., 2023. Shades of green growth scepticism among climate policy researchers. Nat. Sustain. https://doi.org/10.1038/s41893-023-01198-2.
Koukoufikis, G., 2020. The role of micro-enterprises in post-growth urban transitions: an inquiry in Athens and Barcelona. Επιθεώρηση Κοινωνικών Ερευνών 153, 83. https://doi.org/10.12681/grsr.22342.

Kropfeld, M.I., Nepomuceno, M.V., Dantas, D.C., 2018. The ecological impact of Anticonsumption lifestyles and environmental concern. J. Public Policy Mark. 37 (2), 245–259. https://doi.org/10.1177/0743915618810448.
Krpan, D., Basso, F., 2021a. Keep degrowth or go rebirth? Regulatory focus theory and the support for a sustainable downscaling of production and consumption. J. Environ. Psychol. 74, 101586. https://doi.org/10.1016/j.jenvp.2021.101586.
Krpan, D., Basso, F., 2021b. Keep degrowth or go rebirth? Regulatory focus theory and the support for a sustainable downscaling of production and consumption. J. Environ. Psychol. preprint, 1–54.
Kruse, T., Atkinson, G., 2022. Understanding public support for international climate adaptation payments: evidence from a choice experiment. Ecol. Econ. 194, 107321. https://doi.org/10.1016/j.ecolecon.2021.107321.
Kwarteng, K., 2022, September 23. Our Plan for Growth. Conservatives. https://www.conservatives.com/news/2022/our-plan-for-growth.
Lage, J., Thema, J., Zell-Ziegler, C., Best, B., Cordroch, L., Wiese, F., 2023. Citizens call for sufficiency and regulation—A comparison of European citizen assemblies and National Energy and Climate plans. Energy Res. Soc. Sci. 104, 103254. https://doi.org/10.1016/j.erss.2023.103254.
Lamb, W.F., Mattioli, G., Levi, S., Roberts, J.T., Capstick, S., Creutzig, F., Minx, J.C., Müller-Hansen, F., Culhane, T., Steinberger, J.K., 2020. Discourses of climate delay. Global Sustain. 3, e17. https://doi.org/10.1017/sus.2020.13.
Lancaster, K.J., 1966. A new approach to consumer theory. J. Polit. Econ. 74 (2), 132–157.
Lee, J., Koch, M., Alkan-Olsson, J., 2023. Deliberating a Sustainable Welfare–Work Nexus. Politische Vierteljahresschrift. https://doi.org/10.1007/s11615-023-00454-6.
Lehmann, C., Delbard, O., Lange, S., 2022. Green growth, a-growth or degrowth? Investigating the attitudes of environmental protection specialists at the German environment agency. J. Clean. Prod. 336, 130306. https://doi.org/10.1016/j.jclepro.2021.130306.
Lin, Y.-C., Chang, C.A., 2017. Exploring wasteful consumption. J. Environ. Psychol. 49, 106–111. https://doi.org/10.1016/j.jenvp.2017.01.001.
Lorek, S., Fuchs, D., 2013. Strong sustainable consumption governance – precondition for a degrowth path? J. Clean. Prod. 38, 36–43. https://doi.org/10.1016/j.jclepro.2011.08.008.
Löwy, M., Akbulut, B., Fernandes, S., Kallis, G., 2022, April. 1. Monthly review | for an ecosocialist degrowth. Mon. Rev. 73 (11), 56–58. https://monthlyreview.org/2022/04/01/for-an-ecosocialist-degrowth/.
Maki, A., Carrico, A.R., Raimi, K.T., Truelove, H.B., Araujo, B., Yeung, K.L., 2019. Meta-analysis of pro-environmental behaviour spillover. Nat. Sustain. 2 (4), 307–315. https://doi.org/10.1038/s41893-019-0263-9.
Marcuse, H., 1964. One Dimensional Man: The Ideology of Industrial Society. Beacon Press.
Martin, E.S., 2024, March 20. What France's Crackdown on Shein and Temu Means for Global Ultra-Fast Fashion. BBC. https://www.bbc.com/worklife/article/20240320-france-bill-crackdown-ultra-fast-fashion-shein-temu.
McCarthy, J., 2019, March 22. Most Americans Support Reducing Fossil Fuel Use. Gallup. https://news.gallup.com/poll/248006/americans-support-reducing-fossil-fuel.aspx.
McFadden, D., 1974. The measurement of urban travel demand. J. Public Econ. 3 (4), 303–328. https://doi.org/10.1016/0047-2727(74)90003-6.
Meadows, D.H., Meadows, D.L., Randers, J., Iii, W.W.B., 1972. The Limits to Growth. https://policycommons.net/artifacts/1529440/the-limits-to-growth/2219251/.
Meyerhoff, J., Mørkbak, M.R., Olsen, S.B., 2014. A Meta-study investigating the sources of protest behaviour in stated preference surveys. Environ. Resour. Econ. 58 (1), 35–57. https://doi.org/10.1007/s10640-013-9688-1.
Milman, O., 2023, November 27. US Oil and Gas Production Set to Break Record in 2023 Despite UN Climate Goals. The Guardian. https://www.theguardian.com/environment/2023/nov/27/us-oil-gas-record-fossil-fuels-cop28-united-nations.
Miranda, G. (n.d.). Here's how Much you Need to Earn to Be in the Top 1% in your State and Nationwide. USA TODAY. Retrieved May 19, 2023, from https://www.usatoday.com/story/money/2022/01/25/top-1-percent-your-state/9210897002/.
Mullainathan, S. & Shafir, E. (2013). *Scarcity: Why having too little means so much. Macmillan.*
Nilsson, A., Bergquist, M., Schultz, W.P., 2017. Spillover effects in environmental behaviors, across time and context: A review and research agenda. Environ. Educ. Res. 23 (4), 573–589. https://doi.org/10.1080/13504622.2016.1250148.
Noblet, C.L., McCoy, S.K., 2018. Does one good turn deserve another? Evidence of domain-specific licensing in energy behavior. Environ. Behav. 50 (8), 839–863. https://doi.org/10.1177/0013916517718022.
Olk, C., Schneider, C., Hickel, J., 2023. How to pay for saving the world: modern monetary theory for a degrowth transition. Ecol. Econ. 214, 107968. https://doi.org/10.1016/j.ecolecon.2023.107968.
Paulson, L., Büchs, M., 2022. Public acceptance of post-growth: factors and implications for post-growth strategy. Futures 143, 103020. https://doi.org/10.1016/j.futures.2022.103020.
Pickup, O., 2023, January 18. Is Flexible Working Expanding the Gulf between Desk-Based and Deskless Workers? WorkLife. https://www.worklife.news/culture/is-flexible-working-expanding-the-gulf-between-desk-based-and-deskless-workers/.
Pidgeon, N., 2012. Public understanding of, and attitudes to, climate change: UK and international perspectives and policy. Clim. Pol. 12 (sup01), S85–S106. https://doi.org/10.1080/14693062.2012.702982.
Platform London, 2021, May. Stop the Clock: Environmental Benefits of a Shorter Working Week. Platform London. https://6a142ff6-85bd-4a7b-bb3b-476b07b8f08d.usrfiles.com/ugd/6a142f_5061c06b240e4776bf31dfac2543746b.pdf.
Raworth, K., 2015. Why Degrowth has Out-Grown its Own Name. Guest Post by Kate Raworth | From Poverty to Power. https://frompoverty.oxfam.org.uk/why-degrowth-has-out-grown-its-own-name-guest-post-by-kate-raworth/.
Revelt, D., Train, K., 1998. Mixed logit with repeated choices: Households' choices of appliance efficiency level. Rev. Econ. Stat. 80 (4), 647–657. https://doi.org/10.1162/003465398557735.
Rich, S.A., Wright, B.J., Bennett, P.C., 2020. Development of the voluntary simplicity engagement scale: measuring low-consumption lifestyles. J. Consum. Policy 43 (2), 295–313. https://doi.org/10.1007/s10603-018-9400-5.
Rucker, D.D., Galinsky, A.D., 2008. Desire to acquire: powerlessness and compensatory consumption. J. Consum. Res. 35 (2), 257–267. https://doi.org/10.1086/588569.
Rulleau, B., 2023. Household preferences for cyber-attack resilient water distribution networks: A latent class analysis of a discrete choice experiment in France. Water Res. Econ. 43, 100230. https://doi.org/10.1016/j.wre.2023.100230.
Salas, R.N., Jha, A.K., 2019. Climate change threatens the achievement of effective universal healthcare. BMJ 366, l5302. https://doi.org/10.1136/bmj.l5302.
Sandberg, M., 2021. Sufficiency transitions: A review of consumption changes for environmental sustainability. J. Clean. Prod. 293, 126097. https://doi.org/10.1016/j.jclepro.2021.126097.
Sanne, C., 2002. Willing consumers—or locked-in? Policies for a sustainable consumption. Ecol. Econ. 15.
Schmelzer, M., 2022. From luddites to limits? Towards a systematization of growth critiques in historical perspective. Globalizations 1–18. https://doi.org/10.1080/14747731.2022.2106044.
Schmelzer, M., Vetter, A., Vansintjan, A., 2022. The Future Is Degrowth: A Guide to a World beyond Capitalism. Verso Books.
Schneider, F., Kallis, G., Martinez-Alier, J., 2010. Crisis or opportunity? Economic degrowth for social equity and ecological sustainability. Introduction to this special issue. J. Clean. Prod. 18 (6), 511–518. https://doi.org/10.1016/j.jclepro.2010.01.014.
Schor, J.B., 2015. Work sharing. In: D'Alisa, G., Demaria, F., Kallis, G. (Eds.), Degrowth: A Vocabulary for a New Era. Routledge.
Schwartz, S.H., Cieciuch, J., Vecchione, M., Davidov, E., Fischer, R., Beierlein, C., Ramos, A., Verkasalo, M., Lönnqvist, J.-E., Demirutku, K., Dirilen-Gumus, O., Konty, M., 2012. Refining the theory of basic individual values. J. Pers. Soc. Psychol. 103 (4), 663–688. https://doi.org/10.1037/a0029393.
Segev, S., 2015. Modelling household conservation behaviour among ethnic consumers: the path from values to behaviours. Int. J. Consum. Stud. 39 (3), 193–202. https://doi.org/10.1111/ijcs.12167.
Sekulova, F., Kallis, G., Rodríguez-Labajos, B., Schneider, F., 2013. Degrowth: from theory to practice. J. Clean. Prod. 38, 1–6. https://doi.org/10.1016/j.jclepro.2012.06.022.
Sharpe, E.J., Perlaviciute, G., Steg, L., 2021. Pro-environmental behaviour and support for environmental policy as expressions of pro-environmental motivation. J. Environ. Psychol. 76, 101650. https://doi.org/10.1016/j.jenvp.2021.101650.
Sheehy-Skeffington, J., 2020. The effects of low socioeconomic status on decision-making processes. Current opinion in psychology 33, 183–188.
Shreedhar, G., Freitag, P., 2024. Public Understanding of the Sixth Mass Extinction in the United Kingdom. https://doi.org/10.31234/osf.io/2shxz.
Sinha, P., Calfee, C.S., Delucchi, K.L., 2021. Practitioner's guide to latent class analysis: methodological considerations and common pitfalls. Crit. Care Med. 49 (1), e63–e79. https://doi.org/10.1097/CCM.0000000000004710.
Spangenberg, J.H., 2014. Institutional change for strong sustainable consumption: sustainable consumption and the degrowth economy. Sustain. Sci. Pract. Policy 10 (1), 62–77. https://doi.org/10.1080/15487733.2014.11908125.
Spangenberg, J.H., Lorek, S., 2019. Sufficiency and consumer behaviour: from theory to policy. Energy Policy 129, 1070–1079. https://doi.org/10.1016/j.enpol.2019.03.013.
Starmer, K., 2022, September 27. Starmer: We'll turn Britain into a growth superpower to give working people their future back. The Labour Party. https://labour.org.uk/press/starmer-well-turn-britain-into-a-growth-superpower-to-give-working-people-their-future-back/.
Stewart, H., 2023, February 21. Four-day week: 'Major breakthrough' as most UK firms in trial extend changes. The Guardian. https://www.theguardian.com/money/2023/feb/21/four-day-week-uk-trial-success-pattern.
Strazzera, E., Mura, M., Contu, D., 2012. Combining choice experiments with psychometric scales to assess the social acceptability of wind energy projects: A latent class approach. Energy Policy 48, 334–347. https://doi.org/10.1016/j.enpol.2012.05.037.
Stuart, D., Gunderson, R., Petersen, B., 2020. Overconsumption as ideology: implications for addressing global Climate change. Nat. Cult. 15 (2), 199–223. https://doi.org/10.3167/nc.2020.150205.
Symons, A., 2024, March 15. 'Major Breakthrough': French Parliament Votes in Favour of Crackdown on Ultra Fast Fashion. Euronews. https://www.euronews.com/green/2024/03/15/an-ecological-disaster-french-bill-proposes-crackdown-on-throwaway-culture-of-ultra-fast-f.
Testa, F., Cosic, A., Iraldo, F., 2016. Determining factors of curtailment and purchasing energy related behaviours. J. Clean. Prod. 112, 3810–3819. https://doi.org/10.1016/j.jclepro.2015.07.134.
The White House, 2023a. Inflation Reduction Act Guidebook (Version 2). The White House. https://www.whitehouse.gov/wp-content/uploads/2022/12/Inflation-Reduction-Act-Guidebook.pdf.
The White House, 2023, June 28. Bidenomics Is Working: The President's Plan Grows the Economy from the Middle out and Bottom Up—Not the Top Down. The White House. https://www.whitehouse.gov/briefing-room/statements-releases/202

3/06/28/bidenomics-is-working-the-presidents-plan-grows-the-economy-from-the-middle-out-and-bottom-up-not-the-top-down/.
Thorman, D., Whitmarsh, L., Demski, C., 2020. Policy acceptance of low-consumption governance approaches: the effect of social norms and hypocrisy. Sustainability 12 (3). https://doi.org/10.3390/su12031247. Article 3.
Tomaselli, M.F., Kozak, R., Gifford, R., Sheppard, S.R.J., 2021. Degrowth or not degrowth: the importance of message frames for characterizing the new economy. Ecol. Econ. 106952. https://doi.org/10.1016/j.ecolecon.2021.106952.
Trades Union Congress, 2018. A Future that Works for Working People (United Kingdom) [Report]. Trades Union Congress. https://apo.org.au/node/218071.
Trainer, T., 2021. Degrowth: how much is needed? Biophys. Econ. Sustain. 6 (2), 5. https://doi.org/10.1007/s41247-021-00087-6.
Tyson, A., Kennedy, B., 2020. Two-Thirds of Americans Think Government Should Do more on Climate. Pew Research Center.
Tyson, A., Funk, C., Kennedy, B., 2023, August 9. What the Data Says about Americans' Views of Climate Change. Pew Research Center. https://www.pewresearch.org/short-reads/2023/08/09/what-the-data-says-about-americans-views-of-climate-change/.
U.S. Census Bureau QuickFacts: United States, 2022, July 1. https://www.census.gov/quickfacts/fact/table/US/PST045222.
Umit, R., Poortinga, W., Jokinen, P., Pohjolainen, P., 2019. The role of income in energy efficiency and curtailment behaviours: findings from 22 European countries. Energy Res. Soc. Sci. 53, 206–214. https://doi.org/10.1016/j.erss.2019.02.025.
US Census Bureau, 2022a. Income in the United States: 2022. Census.Gov. https://www.census.gov/library/publications/2023/demo/p60-279.html.
US Census Bureau, 2022, June. America Is Getting Older. Census.Gov. https://www.census.gov/programs-surveys/popest/data/tables.html.
US Census Bureau. (n.d.). Hispanic or Latino Origin. Census.Gov. Retrieved January 29, 2024, from https://www.census.gov/programs-surveys/acs/.
USAGov, 2023, December. How to get insurance through the ACA Health Insurance Marketplace | USAGov. https://www.usa.gov/health-insurance-marketplace.
van den Bergh, J.C.J.M., 2011. Environment versus growth—A criticism of "degrowth" and a plea for "a-growth.". Ecol. Econ. 70 (5), 881–890. https://doi.org/10.1016/j.ecolecon.2010.09.035.
van den Bergh, J.C.J., 2017. A third option for climate policy within potential limits to growth. Nat. Clim. Chang. 7 (2). https://doi.org/10.1038/nclimate3113. Article 2.
Verfuerth, C., Henn, L., Becker, S., 2019. Is it up to them? Individual leverages for sufficiency. GAIA - Ecol. Perspect. Sci. Soc. 28 (4), 374–380. https://doi.org/10.14512/gaia.28.4.9.
Videira, N., Schneider, F., Sekulova, F., Kallis, G., 2014. Improving understanding on degrowth pathways: an exploratory study using collaborative causal models. Futures 55, 58–77. https://doi.org/10.1016/j.futures.2013.11.001.
Wang, Y., Liu, B., Lin, S., Liu, L., Wu, Y., Cui, L., 2022. The effects of subjective socioeconomic status on conspicuous consumption. J. Appl. Soc. Psychol. 52 (7), 522–531. https://doi.org/10.1111/jasp.12876.
Weller, B.E., Bowen, N.K., Faubert, S.J., 2020. Latent class analysis: A guide to Best practice. J. Black Psychol. 46 (4), 287–311. https://doi.org/10.1177/0095798420930932.
Werfel, S.H., 2017. Household behaviour crowds out support for climate change policy when sufficient progress is perceived. Nat. Clim. Chang. 7 (7). https://doi.org/10.1038/nclimate3316. Article 7.
Whitmarsh, L., Corner, A., 2017. Tools for a new climate conversation: A mixed-methods study of language for public engagement across the political spectrum. Glob. Environ. Chang. 42, 122–135. https://doi.org/10.1016/j.gloenvcha.2016.12.008.
Wiedmann, T., Lenzen, M., Keyßer, L.T., Steinberger, J.K., 2020. Scientists' warning on affluence. Nat. Commun. 11 (1). https://doi.org/10.1038/s41467-020-16941-y. Article 1.
World Bank, 2012. Inclusive Green Growth: The Pathway to Sustainable Development. The World Bank. https://doi.org/10.1596/978-0-8213-9551-6.
Wurpts, I.C., Geiser, C., 2014. Is adding more indicators to a latent class analysis beneficial or detrimental? Results of a Monte-Carlo study. Front. Psychol. 5. https://doi.org/10.3389/fpsyg.2014.00920.
YouGov, 2019. YouGov / Eurotrack Survey Results [dataset].
Zaval, L., Keenan, E.A., Johnson, E.J., Weber, E.U., 2014. How warm days increase belief in global warming. Nat. Clim. Chang. 4 (2), 143–147. https://doi.org/10.1038/nclimate2093.
Zawojska, E., Bartczak, A., Czajkowski, M., 2019. Disentangling the effects of policy and payment consequentiality and risk attitudes on stated preferences. J. Environ. Econ. Manag. 93, 63–84. https://doi.org/10.1016/j.jeem.2018.11.007.
Ziegler, A., 2017. Political orientation, environmental values, and climate change beliefs and attitudes: an empirical cross country analysis. Energy Econ. 63, 144–153. https://doi.org/10.1016/j.eneco.2017.01.022.