

MASTERARBEIT | MASTER'S THESIS

Titel | Title

Beyond Zero-Sum Thinking: How Nonzero-Sum Beliefs and
Positive Outcome Expectancies Drive Consumption Reduction

verfasst von | submitted by

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angestrebter akademischer Grad | in partial fulfilment of the requirements for the degree of
Master of Science (MSc)

Wien | Vienna, 2025

Studienkennzahl lt. Studienblatt | Degree
programme code as it appears on the
student record sheet:

UA 066 840

Studienrichtung lt. Studienblatt | Degree
programme as it appears on the student
record sheet:

Masterstudium Psychologie

Betreut von | Supervisor:

Univ.-Prof. Dipl.-Psych. Dr. Arnd Florack

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Acknowledgement

I would like to express my big gratitude to my supervisor Univ.-Prof. Dipl.-Psych. Dr. Arnd Florack for his ideas, guidance, advice and patience.

I also owe special thanks to Lorenz Burgstaller for his flexibility, thoughts and expertise on nonzero-sum beliefs.

A big thank you to all the participants who took their time to take part in the online survey.

Abstract

The present study contributes to the research on sustainable consumer behaviour by examining the construct of nonzero-sum beliefs (Crocker et al., 2017) in relation to individuals' willingness to reduce their consumption for environmental reasons. Nonzero-sum beliefs refer to a cooperative mindset, which stands in contrast with a competitive, zero-sum perspective. Nonzero-sum beliefs were hypothesized to predict greater willingness to reduce consumption. In addition, the study investigated whether positive outcome expectancies (Bandura, 1986) mediate the relationship between nonzero-sum beliefs and readiness to reduce consumption. The results of the study indicated that both individual and social nonzero-sum beliefs significantly predicted consumption reduction. Notably, positive outcome expectancy emerged as a particularly robust predictor, mediating the relationship between nonzero-sum beliefs and willingness for consumption reduction. These findings suggest that nonzero-sum mindsets underlie pro-environmental attitudes, while individuals' positive anticipations about the outcomes of consumption reduction play a decisive role in transforming the attitudes into sustainable behaviour. The results have important implications both for future research and for offering a new approach to pressing environmental challenges.

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Keywords: nonzero-sum beliefs, consumption, consumer behaviour, outcome expectancies, environment, overconsumption, sustainability, cooperation

Beyond Zero-Sum Thinking:

How Nonzero-Sum Beliefs and Positive Outcome Expectancies Drive Consumption

Reduction

„Infinite growth of material consumption in a finite world is an impossibility.”

E. F. Schumacher

Scientists have been warning us against the environmental consequences of affluence and overconsumption for years now (Lynas et al., 2021; Powell, 2017; Ripple et al., 2019; Steffen et al., 2015). There is undeniable evidence that predominantly human actions lie at the heart of our environmental issues (Cook et al., 2013; Lee & Romero, 2023; Myers et al., 2021) and that the unparalleled level of consumption nowadays is unsustainable both environmentally and socially (United Nations Environment Programme [UNEP], 2024a). Most notably, the overconsumption of wealthy households worldwide has proven to be the driving force behind the increasing climate warming (Lee & Romero, 2023), while at the same time leading to other global environmental impacts and social disparities (Ivanova et al., 2015; Ivanova et al., 2020; UNEP, 2024a; Wiedmann et al., 2020). Furthermore, the adverse effects of overconsumption – and to a lesser extent of overpopulation – are so extensive that they have for the most part exceeded the benefits recent technological progress has brought along (Marín-Beltrán et al., 2022; Wiedmann et al., 2020).

Nevertheless, around 80% of the global energy used today continues to be produced from finite resources (Deshmukh et al., 2021; National Geographic Society, 2022). Moreover, the manifold repercussions of the still ongoing war in the Ukraine with no durable peace agreement expected in the near future (Cancian & Park, 2025), and the related energy crisis with its soaring international energy prices (Sun et al., 2024) have made the urgency of reducing (over)consumption more pressing than ever (Cho, 2020; Crow et al., 2022; International Energy Agency, 2022; UNEP, 2022). In Austria for example, a popular

newspaper went as far as to describe the need for saving on gas and energy as a “Volkssport”, which translates loosely to a “national pastime” (Münzer-Greier & Poyer, 2022). In addition to that, according to the recent annual report on the environment of the United Nations, only a drastic reduction of consumption can prevent a global climate disaster (UNEP, 2024b). Given this background, a better understanding of the processes and factors contributing to our willingness to reduce consumption is highly relevant from a scientific as well as from a pragmatic point view.

While existing research has highlighted a range of motivational and contextual factors that influence consumers’ pro-environmental behaviour (Sukumaran & Majhi, 2024; Vieira et al., 2023), scientists’ interpretation of the role that individuals’ mindsets – people’s intuitive, everyday assumptions about the world – may play in sustainable behaviour remains incomplete, and their findings on consumers’ behaviours are sometimes contradictory. At the same time, driven by the global environmental concerns and the recent political developments mentioned before, there is growing scientific and political interest in how psychological mechanisms translate consumers’ everyday assumptions into tangible behavioural changes.

To date, as to my knowledge, the two lines of research concerning lay beliefs and individuals’ motivational mechanisms have often been studied separately. However, the potential for certain belief systems to incite sustainable consumer choices and to contribute to pro-environmental behaviour, particularly through specific cognitive processes, is a promising scientific topic, especially in light of the intricate complex of problems our environment has been challenged with. This underexplored subject highlights a certain gap in the scientific literature: we know relatively little about exactly how our everyday beliefs about the world may be linked to our willingness to reduce our consumption, or which

additional psychological mechanisms might enhance the influence of our lay beliefs on our behavioural patterns.

My thesis seeks to address this gap by developing and testing a theoretical model that integrates insights from a psychological perspective. Specifically, it examines whether certain lay beliefs – the so called nonzero-sum beliefs (Crocker et al., 2017) – are associated with people's readiness to reduce consumption, and whether this relationship is mediated by a particular motivational construct, positive outcome expectancy (Bandura, 1986). The aim of the thesis is to add to a more nuanced scientific understanding of the psychological processes influencing sustainable consumption as well as to provide a contribution to evidence-based science indispensable for promoting environmentally responsible action.

Contribution to Research and Research Question

If people believe that limiting their individual consumption will produce positive outcomes – less waste, more biodiversity, saving resources – they should be more willing to act correspondingly, since positive outcome expectations are likely to foster and encourage people's behaviour (Bandura, 2001). In other words, individuals who anticipate positive personal or societal consequences from reducing their consumption and behaving environmentally friendly would be more likely to adopt pro-environmental attitudes and behaviour (Bandura, 2001; Steg & Vlek, 2009).

Although previous research has underscored the role of the complex network of different factors which shape sustainable consumption behaviour, the possible connection of individual nonzero-sum beliefs, as conceptualized by Crocker et al. (2017), and pro-environmental attitudes has not yet been scientifically explored, as to my current knowledge. Nonzero-sum beliefs suggest that personal and collective interests can align harmoniously, but their validity has so far been studied within romantic relationships only, which leaves open the question as to how these beliefs effectively influence individuals' readiness to

reduce their consumption for environmental reasons. The mediating role of outcome expectancy has not yet been systematically examined in the environmental context either, leaving a gap in the scientific literature regarding its possible interactions with lay beliefs.

The study at hand tackles this gap by adding to the still scarce research on the construct of nonzero-sum beliefs as a lay theory, while simultaneously providing new insight into the role of positive outcome expectancies as a possible mediator in the context of pro-environmental attitudes and sustainable consumption. Consequently, my research question is: How are nonzero-sum beliefs related to individuals' readiness to reduce consumption, and to what degree is this relationship mediated by outcome expectancies?

Conceptual Framework

Scientific research on overconsumption, the willingness to reduce it for environmental reasons, and pro-environmental behaviour has been expanding since the mid-1960s. Ever since, numerous academic areas ranging from economics to political studies to psychology to anthropology to sociology have been offering various insights into the possible factors that drive people to behave (more) environmentally friendly (Li et al., 2019). Within this framework, the complexity of what shapes pro-environmental behaviour and fosters limiting one's consumption from a scientific point of view is nearly self-evident. For example, one could be reducing one's energy consumption for financial reasons or out of personal (religious, cultural, ethical, etc.) convictions or because one wants to reduce one's impact on the environment as such or because one is strictly politically motivated to be doing so – or for all those reasons, for different ones or perhaps for none of them. In other words, pro-environmental behaviour as well as the willingness to consume less for the sake of the environment are arguably influenced by a complex interplay of a myriad of social (external) and personal (internal) factors (Li et al., 2019; Piao & Managi, 2024). In line with this complexity – or because of it – there has been mixed evidence on the so called “green gap”

(Sukumaran & Majhi, 2024) between one's existing pro-environmental attitudes and pro-environmental behaviour, i.e. having pro-environmental attitude and worrying about climate change does not necessarily translate into consistent pro-environmental behaviour (Farjam et al., 2019; Franco & Ghisetti, 2022; Lübke, 2021; Vieira et al., 2023). Moreover, individuals' actual readiness to reduce their consumption remains generally overlooked by scientists, even in studies on carbon-footprint and sustainable behaviour and behaviour change (Thaller et al., 2020; Whitmarsh et al., 2017).

Social Dilemmas in Environmental Research

The willingness and inclination to limit (one's own) consumption is where – but not limited to – the role of social psychology as a contributing research field on the topic of (over)consumption and its psychological mechanisms has become increasingly relevant. It is also why social psychology has been gaining recognition for its singular position in allowing to approach “green thinking” and consumption reduction as an interpersonal and intergroup phenomenon (Clayton, 2024). As Clayton (2024) puts it, awareness for climate change itself is socially anchored, as it is based on social exchange with others at least as much as it is derived from personal experience. In addition, social psychology relates directly to some of the specific challenges research in the environmental domain has been confronted with, which as previously mentioned, lie not only in the complex nature of pro-environmental behaviour (Blankenberg & Alhusen, 2019; Gifford & Nilsson, 2014; Syed et al., 2024) but also have to do with the perception of climate change mitigation as a social phenomenon in the sense of a social dilemma (Doran & Hanss, 2022; Lübke, 2021).

As a social dilemma, climate change mitigation involves cooperation both from and with others (Lübke, 2021) on the one hand, while simultaneously constituting a clash between one own's interests and those of the collective, at least on a temporary basis (Balliet & Van Lange, 2013) on the other hand. Reducing climate change and pursuing environmental

sustainability is presumably one of the most widely familiar and acknowledged social dilemmas (Capstick, 2013; Van Lange et al., 2013). For instance, using less water for environmental reasons from an individual consumer's point of view might mean taking only a short shower when necessary and abstaining from taking hot baths, washing one's clothes less often and always turning off the tap while brushing one's teeth; yet, all of those measures would make an actual difference for the environment if done by *everyone* and not only by few, effectively amounting to cooperation for the collective goal of mitigating climate change. As already pointed out, however, consistently reducing water usage might for example equal hot baths only as an exception (or never), and keeping an eye on the clock while showering, possibly resulting in less immediate relaxation or enjoyment, or even feelings of sacrifice. In other words, this is an example of how a clash of an instant personal versus a general collective interest might come into existence, or how the individual perception of a possible social dilemma usually emerges. In a social dilemma, if all people decide to be noncooperative, all will be worse off than if all choose to cooperate – but a noncooperative choice still leads to a better (instantaneous) individual outcome. Are consumers nevertheless likely to “see the bigger picture” rather than cater to one's own immediate personal interests? Which factors predict their inclinations, and which factors may possibly act as a mediator in perceiving collective interests as one's own interests?

While the social dilemma concept underscores the structural and, above all, interpersonal nature of environmental challenges, it does not fully account for the cognitive mechanisms through which individuals interpret and respond to the environmental dilemma. In other words, people's decisions to cooperate in favour of the collective good – the environment – are not only influenced by external factors such as political incentives, financial situation, available natural resources, but also by an individual's internalized beliefs about how the social world operates. These beliefs – formed through experience, culture and

socialization – can play a crucial role in shaping one's perception of whether cooperation is worthwhile, possible, or even reasonable. To better understand how individuals make sense of social dilemmas such as climate change mitigation, it is therefore essential to examine the implicit psychological frameworks that guide one's interpretations of social dilemmas in general. One such framework is the concept of lay theories, which may significantly influence pro-environmental attitudes and behaviour by affecting how people construe the relationship between individual and collective outcomes in the context of environmental social dilemmas.

Lay Theories

The concept of lay theories presents a theoretical approach of interpreting the ways individuals navigate social circumstances and conflicting interests. A lay theory is fundamental within a given culture or environment and stands for people's generalized convictions and core notions about the nature of their social world (Levy et al., 2006). Accordingly, in social psychology, lay theories refer to implicit belief systems that shape how people construe and respond to their social world (Chiu et al., 1997; Molden & Dweck, 2006).

Also called naïve theories or implicit beliefs, lay theories allow one not only to detect meaning in one's own behaviour but to make sense of the activities of others in various social situations and contexts (Molden & Dweck, 2006). Consequently, lay theories serve simultaneously as an inherent frame of reference for oneself in relation to others, and as an implicit filter (Levy et al., 2006) and a guide to the actions and interpretations of others. Furthermore, lay theories are connected to an individual's goals, and perhaps more importantly, lay theories are related to the extent to which one is inclined to pursue these goals; hence, they form the basis of an even broader framework of beliefs and objectives (Molden & Dweck, 2006), which in turn lead to the activation of compensating mechanisms

and distortions when encountering information that might contradict one's lay beliefs (Plaks et al., 2009).

In this way, implicit beliefs function as cognitive frameworks and general frames of references with profound influence on individuals' decision-making, goal setting and behaviour patterns (Molden & Dweck, 2006). Since lay theories apply to people's general understanding as to how the world works, it is plausible that they regulate people's everyday actions and notions as well.

Correspondingly, lay theories affect how people perceive cooperation and competition in social and consequently, in environmental contexts. For instance, naïve theories about climate change mitigation could manifest themselves in attitudes like, "No one cares authentically about climate change", or "We are all responsible for how we treat what is left of nature's resources". From those two different frames of mind follow different dispositions and eventually behaviour in relation to the environment, which are furthermore likely to become solidified over time by means of cognitive distortions (Plaks et al., 2009). As a result, lay theories may lead individuals to perceive a social setting under identical circumstances either as cooperation or as competition, depending on the implicit beliefs people are inclined to hold.

As mentioned before, climate change mitigation is generally interpreted as a social dilemma and often perceived as a sacrifice of personal well-being or individual interests for the greater good, i.e. the environment. For this reason, individuals' lay beliefs about whether cooperation is beneficial or detrimental may play a critical role in shaping their willingness to reduce consumption and behave environmentally friendly. A particularly relevant and promising notion in the context of lay theories is the concept of nonzero-sum beliefs as introduced by Crocker et al. (2017).

Nonzero-Sum Beliefs

According to Crocker et al. (2017), nonzero-sum beliefs act as a mindset or a lay theory. In congruence with the concept of lay theories, nonzero-sum beliefs provide a general context for interpreting and building one's expectations within the framework of one's social relations. Hence, nonzero-sum beliefs are abstract, broad persuasions postulating that a conflict of interests can be solved in a mutually satisfactory way for all sides involved (Crocker et al., 2017).

Ecosystem Motivation

The key premise of the theory behind nonzero-sum beliefs lies in the so-called ecosystem motivation – as opposed to what Crocker and Canevello (2018) describe as egosystem motivation – and in the assumption that one's motivational orientation shapes one's fundamental frames of references. In other words, one's predominantly ecosystem or egosystem motivation plays a crucial role in the formation of one's lay beliefs, including whether one perceives (interpersonal) relationships in a zero-sum or a nonzero-sum way.

Contrary to the egosystem motivation – which assumes that one is responsible for one's own well-being, the latter of which comes at the detriment of others in case of conflict of interests and needs – according to the ecosystem motivation, “what come around, goes around”, and attending to and looking after each other does not result in negative consequences for oneself (Crocker et al., 2017). The ecosystem motivation proposes not only that people assume that social relationships function in a nonzero-sum fashion; it also suggests that people with an ecosystem motivation tend to be constructive, understanding and prosocial, instead of exhibiting a competitive mindset (Crocker & Canevello, 2018). Such people are also inclined to offer support to others and seem to believe that one should take care of one another (Crocker & Canevello, 2018). Even most importantly, the fundamental rationale of people with ecosystem motivation prompts them to “include themselves in their

interpersonal ecosystem, so they aim to be constructive and supportive in ways that will not harm themselves” (Crocker & Canevello, 2018, p. 50). This, in turn, facilitates a sustainable (social) context over time, beneficial not only for oneself but for the others, within which giving in the sense of providing does not entail losses or sacrifices (Crocker & Canevello, 2018). Perceiving oneself as part of one’s social system allows for a feeling of belonging, thereby enabling the formation of supportive interpersonal relations and providing conditions for cooperation.

Cooperative Mindset

Furthermore, nonzero-sum beliefs constitute a cooperative mindset, which is arguably the decisive characteristic of nonzero-sum beliefs. To put it even more precisely, nonzero-sum convictions translate into an inherent inclination to anticipate and presume cooperation and responsiveness from others. This is the entire opposite of the so-called thinking in zero-sums. According to the zero-sums mindset, one party’s gains equal (exactly) another party’s losses. From a zero-sum mindset perspective, there cannot be a net gain. This principle applies even to situations when resources are unlimited (Meegan, 2010), or when cooperation can clearly lead to shared benefits (Fearon & Götz, 2024) – with the social dilemma case of climate change and overconsumption being an excellent instance for the latter.

In contrast, the concept of nonzero-sum beliefs challenges the assumption that conflicts must ultimately lead to a *win-lose* outcome. On the contrary, the research article by Crocker et al. (2017) argues that people with nonzero-sum beliefs genuinely trust that a conflict situation allows for a *win-win* solution. In other words, they are confident that both sides in a potential conflict can obtain what they want, while at the same time there does not have to be losers. Under the latter presumption, one own’s interests are achievable along with the interests of others, as they are not mutually exclusive.

In line with this theoretical assumption, nonzero-sum beliefs in the study of Crocker et al. (2017) proved to be statistically strongly correlated with individuals' optimism about successfully dealing with conflicts in interpersonal relationships as well as with responsiveness and relationship quality. The research paper by Crocker et al. (2017) also provides evidence that nonzero-sum beliefs, like other mindsets or naïve theories, possibly become fortified in the course of time by the very same mechanisms they are simultaneously related to, like compassion, optimism and (perceived) responsiveness. Taking this into consideration, I argue that the framework of environmental social dilemmas, particularly in the context of the need for reducing one's consumption for the common good, represents circumstances under which nonzero-sum beliefs can consequently play a crucial role in terms of how the environmental dilemma is perceived and / or solved by an individual consumer.

Nonzero-Sum Beliefs from a Consumer's Perspective

Combined together, the key characteristics of the concept of nonzero-sum beliefs enable a different approach to social conflicts – one based on intrinsic cooperation and a *win-win* standpoint. As such, the approach also implies a possible solution to social dilemmas in the environmental context. Applied to the matter of climate change mitigation and the urgency of the need for limiting overconsumption, the theory of Crocker et al. (2017) suggests that rather than perceiving pro-environmental behaviour as an individual sacrifice or even an instant loss, one can look at environment as a nonzero-sum entity, where there are no (net) losses and where personal and collective interests do not contradict each other. Put differently, this suggestion translates into the expectation that nonzero-sum beliefs should correlate positively with one's willingness to reduce consumption in the context of sustainability. Furthermore, the more pronounced the nonzero-sum convictions, the bigger the extent should be of one's willingness to cooperate with everyone else for the sake of everyone's good. In other words, if individuals with strong nonzero-sum beliefs should employ those beliefs beyond

interpersonal relationships to their pro-environmental behaviours, they may view reducing consumption not as an individual burden but as a shared, cooperative effort that benefits both the self and society.

Consequently, taking the fundamental characteristics of nonzero-sum beliefs into account, namely that individuals with strong nonzero-sum beliefs are more likely to perceive cooperative efforts as mutually beneficial rather than as personal losses, it is justified to assume that nonzero-sum beliefs play a role in shaping individuals' expectations about the outcomes of specific behaviours. In other words, the extent to which individuals are convinced that reducing their own consumption will contribute meaningfully to the collective goal of mitigating climate change, may be enhanced by their underlying beliefs that individual and collective interests are not only not mutually exclusive but also compatible.

Thus, by fostering more optimistic, positive expectations (Crocker et al., 2017) nonzero-sum beliefs should also influence the perceived specific outcomes of pro-environmental behaviour and sustainable consumption nonzero-sum beliefs: if people believe that acting in a cooperative fashion leads to shared and mutual benefits, they should be more likely to expect that their own sustainable behaviour will have palpable, positive consequences both for themselves and for others. These expectations, in turn, play a vital role in motivating behavioural change. Assuming that one perceives that one's actions yield desirable and effective outcomes, one should be more inclined to engage in and maintain those behaviours – and even more so in contexts that involve personal costs, such as reducing consumption. In this sense, the expectation that one's behaviour does make an actual difference may serve as a cognitive mechanism that helps explain how and why nonzero-sum beliefs are associated with a greater willingness to act sustainably.

In view of this reasoning, having positive expectations regarding the outcome of one's sustainable behaviour, should act as a facilitator in the relationship between nonzero-sum

beliefs and individuals' inclination to consume less for environmental reasons. Hence, I suggest that harbouring positive outcome expectancies mediates the relationship between one's nonzero-sum beliefs and one's readiness to limit one's consumption for the sake of the environment.

Outcome Expectancies

The theoretical construct of outcome expectancy that may act as a mediator in the relationship between one's lay beliefs and one's proneness to act on those beliefs was introduced by Bandura (1977, 1986). Outcome expectancies refer to a person's view that a certain behaviour will lead to specific outcomes, or in other words, represent a subjective belief that a certain consequence will follow the execution of a certain action (Bandura, 1986; Lippke, 2020). Outcome expectancies are not to be seen as a characteristic of an action but are interpreted as the anticipated results of a deliberate behaviour performed by a person (Bandura, 2001). Importantly, outcome expectancies may be regarded as "*if-then*" assumptions: if one engages in a certain activity, then one can expect a particular outcome (Fouad & Guillen, 2006). Hence, outcome expectancies differ in their degree of desirability and probability (Bandura, 2001). Unsurprisingly, people are inclined to engage in a behaviour the consequences of which they perceive as positive and desirable, while avoiding actions related to negative outcomes (Bandura, 2001).

Outcome expectancies are closely related to the construct of self-efficacy in Bandura's (1986) social cognitive theory, but while outcome expectancies concern the results of one's actions, self-efficacy refers to the extent to which one is confident of one's ability to complete a task or perform an action (I am certain that I am fit enough to cycle all the way to the office; I am not convinced that I am physically capable of cycling in the winter). Although both concepts are closely associated and often mentioned together in relation to behavioural theories, for the purpose of this thesis it suffices to propose that outcome

expectancies are a valid measure of behaviour maintenance and regulation. Indeed, extensive research on the significance of outcome expectancies has repeatedly acknowledged their role as a predictor of health behaviour (Bohlen et al., 2022; Hagger, 2025; Reesor et al., 2017; Thompson-Hollands et al., 2014; Williams et al., 2005) as well as in connection to the treatment of smoking and alcohol addictions (Kaufmann et al., 2020; Reich et al., 2010).

However, there has been comparatively little research specifically dedicated to the possible influence of outcome expectancies and their relationship with other variables from the perspective of climate change mitigation and reducing consumption. At the time of writing of this thesis (February 2025), the scientific findings of two relatively recently published research papers are of particularly relevance in this context – one is by Collado and Evans (2019) and the other one is by Gregersen et al. (2021).

Collado and Evans (2019) investigated the moderating effect of outcome expectancies in children's contact with nature and their pro-environmental attitudes and behaviour; while the study focused on children, it served to highlight the complex role of outcome expectancies in potentially contributing to pro-environmental behaviour. In that case, outcome expectancy referred to a child's belief about the effectiveness of its actions in benefiting the environment, "When turning off the tap while brushing my teeth, I help to protect the places in nature where plants and animals live" (Collado & Evans, 2019). Although the moderation effect was less pronounced in children with higher outcome expectancies than in those with lower outcome expectancies, the findings of the study confirmed the moderating role of outcome expectancies and their correlation with pro-environmental attitudes and behaviour (Collado and Evans, 2019).

The results published in the research article of Gregersen et al. (2021) also supported the moderating function of outcome expectancies, in this instance in connection to energy-saving behaviour on an individual and collective level. It is worth noting that the moderating

effect of collective outcome expectancy revealed to be more stable than the moderating effect of individual outcome expectancy (Gregersen et al., 2021). One potential explanation of this finding might have to do with the “inherently collective nature of climate change” (Gregersen et al., 2021, p.12) and as such, with the anticipation of the outcomes of shared and combined efforts. This explanation highlights once again the social dilemma character of people’s readiness to contribute to climate change mitigation and to partake in the reduction of (over)consumption. It also provides the conceptual foundation to the reasoning behind this thesis.

Research Hypotheses

People with strong nonzero-sum beliefs see themselves as part of their ecosystem, which is why they deem that what is good for others good for themselves and vice versa (Crocker & Canevello, 2018). Therefore, individuals with nonzero-sum beliefs would not act out of personal interests per se but rather believe in a *win-win* solution to problems. Moreover, individuals with strong nonzero-sum beliefs view social interactions in general as *win-win* rather than *win-lose* situations (Crocker et al., 2017). I propose that this theoretical assumption can be extended to environmental issues: since by definition everyone is part of the environment as a global, interrelated ecosystem, I argue that strong nonzero-sum beliefs should lead to a greater willingness to act environmentally friendly and reduce one’s consumption, the latter being one’s contribution to the well-being of others and / or the environment, *including oneself*. I also assume that weak nonzero-sum beliefs – equalling zero-sum beliefs in their most extreme version – should on the other hand be associated with bigger unwillingness to reduce one’s consumption for environmental reasons, as one would not see oneself as part of the system and thus be likely to see one’s voluntary reduction as a personal loss, namely one that *only* others would be directly profiting from.

Moreover, I suggest that one key mechanism that may help translate nonzero-sum beliefs into actual pro-environmental action is positive outcome expectancy. As introduced in Bandura's (1986, 2001) social cognitive theory, positive outcome expectancies represent individuals' confidence about whether engaging in a certain behaviour will lead to desirable outcomes. Applied to the context of sustainability, individuals would be more inclined to reduce consumption if they believe that doing so should lead to meaningful, positive environmental effects (Collado & Evans, 2019; Gregersen et al., 2021). Consequently, it is plausible to propose that outcome expectancies should not only predict behaviour but that they may also mediate the relationship between nonzero-sum beliefs and behavioural readiness (MacKinnon et al., 2007) and specifically, that they should facilitate the effect of nonzero-sum beliefs on the willingness to act environmentally friendly.

Furthermore, I argue that there are compelling theoretical and empirical reasons to expect that nonzero-sum beliefs are positively associated with outcome expectancies. First, individuals with strong nonzero-sum beliefs tend to approach social interactions and fundamentally collective challenges such as climate change with optimism and trust in mutual gains (Crocker et al., 2017). This mindset helps to reduce individuals' perception of potential conflicts between personal and collective interests, which can increase the likelihood of expecting positive, rather than futile or negative, consequences from one's actions. Second, Crocker and Canevello (2018) suggest that people develop and sustain nonzero-sum beliefs when they repeatedly experience that their own well-being improves when they contribute to others' well-being, and vice versa. On that account, it is reasonable to assume that individuals with greater nonzero-sum beliefs may have accumulated positive personal experiences with prosocial or pro-environmental behaviour that reinforce their belief in effective, meaningful outcomes. As a result, it can be inferred that such experiences would

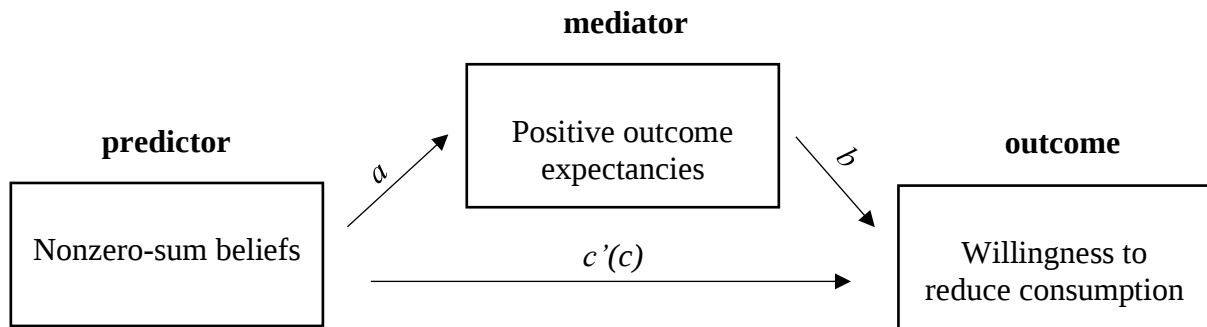
serve as a cognitive basis for expecting that future cooperative behaviour – like consumption reduction out of concern for the environment – should also yield beneficial results.

At the same time, there is strong evidence that positive outcome expectancies should increase people's willingness to reduce consumption or exhibit pro-environmental behaviour. People are generally more motivated to act when they believe their actions will have an impact (Bandura, 2001). In the context of environmental sustainability, research shows that people who believe their behaviour makes a difference – whether individually or collectively – are more likely to engage in energy saving, and pro-environmental behaviour (Collado & Evans, 2019; Gregersen et al., 2021). Conversely, I expect that negative outcome expectancies would correspondingly lead to less inclination to reduce one's consumption for environmental reasons, even if exhibiting a nonzero-sum mindset (for example, it does not make any difference if I separate my plastic waste for recycling, since huge amounts of new plastic are being produced worldwide every day).

To summarize, this thesis proposes that outcome expectancies act as a mediating mechanism through which nonzero-sum beliefs foster a willingness to reduce consumption. I argue that strong nonzero-sum beliefs should be associated with more positive outcome expectancies regarding environmental behaviour, and that these expectancies, in turn, predict a higher readiness to limit one's consumption for the sake of the environment. In accordance with that, the study at hand is consistent with a statistical mediation model, as demonstrated in Figure 1. In the mediation model, nonzero-sum beliefs serve as an independent variable, while the dependent variable is individuals' readiness to reduce their consumption for the sake of the environment; positive outcome expectancies act as a mediator.

Figure 1

Mediation Path Model of Nonzero-Sum Beliefs, Positive Outcome Expectancies and Readiness for Consumption Reduction



Note. The different paths (a , b , c' , c) stand for the different types of assumed correlations in the mediation model.

I hypothesized accordingly:

Hypothesis 1: More pronounced nonzero-sum beliefs predict greater readiness for consumption reduction, both directly and indirectly through the mediator outcome expectancy (Path c in Figure 1, also termed the total effect).

Hypothesis 2: Higher levels of nonzero-sum beliefs correlate positively with higher outcome expectancies (Path a in Figure 1).

Hypothesis 3: Higher outcome expectancies are positively associated with a higher willingness to reduce one's consumption (Path b in Figure 1).

Hypothesis 4 (Mediation Hypothesis): The relationship between nonzero-sum beliefs and readiness for consumption reduction is mediated by outcome expectancies (indirect effect).

The c' path is the direct effect between the predictor nonzero-sum beliefs and the outcome willingness to reduce consumption excluding the effect of the mediator variable positive outcome expectancies.

Method

The Study

To examine the proposed mediation model, this study investigated the relationships between nonzero-sum beliefs, outcome expectancies, and individuals' willingness to reduce their consumption for environmental reasons. Based on social-cognitive theory (Bandura, 1986, 2001) and previous research on nonzero-sum beliefs (Crocker et al., 2017), it was hypothesized that individuals with stronger nonzero-sum beliefs would not only be more willing to reduce their consumption but would also be more likely to hold positive expectations about the relevance of their consumption reduction. Outcome expectancies were assumed to mediate the relationship between nonzero-sum beliefs and consumption reduction.

To test these hypotheses, a cross-sectional online survey was conducted with a sample of adult participants ($N = 202$), who completed measures of nonzero-sum beliefs, outcome expectancies, and readiness for consumption reduction. The study design and analysis allowed for the examination of direct, indirect, and total effects of the variables using mediation analysis.

Participants

An a-priori power analysis was conducted by means of the online calculator "Monte Carlo power analysis for the indirect effects" by Schoemann et al. (2017) in order to estimate the minimum sample size required to test the study hypotheses. Results indicated the necessary sample size to achieve 80% power for detecting a medium effect ($r = 0.30$), at a significance criterion of $\alpha = .05$, was $N = 153$ for a mediation analysis (Cohen, 2013). Accordingly, I targeted at least 200 participants to ensure that the sample was big enough in case that the data of some participants was not complete and could not be used in the mediation analysis.

Apart from having sufficient command of German language and being at least 18 years of age, there were no other prerequisites for the participation in the study. The recruitment followed the practice of exponential non-discriminative (partly virtual) snowball sampling. The recruiting methods included social media (mainly WhatsApp and Facebook), emails, personal invitations, text messages as well as word of mouth. There was no financial compensation for the participation.

The final sample consisted of 202 participants (153 of them identified as women, 43 as men, 5 as diverse, and one undisclosed; $M_{age} = 41.91$, $SD_{age} = 16.08$) and the findings reported in this study are based on data voluntarily obtained from them. The participants were predominantly from the EU (Austria 55.4%, Germany 31.2%, other EU countries 8.4%, other non-EU countries 3%, Switzerland 1.5%, undisclosed 0.5%) and the majority of them had a university or a college degree (65.8%).

Design

The study employed a non-experimental, cross-sectional, correlational, within-subjects quantitative survey design using three continuous variables assessed on a Likert-scale. Nonzero-sum beliefs served as a continuous predictor; positive outcome expectancies acted as a mediator and were also a continuous variable; individuals' readiness to reduce their consumption for the sake of the environment was the continuous outcome. The survey was conducted by means of an online questionnaire on the platform www.unipark.com, which provides certified secure data processing.

Measures

Nonzero-Sum Beliefs Scales

Nonzero-sum beliefs were assessed by means of an earlier, expanded version of the Nonzero-Sum Beliefs Scale developed by Burgstaller and Florack (2025). It consisted of a

total of 16 items, which were all measured on a 7-point Likert-scale from 1 = *Strongly Disagree* to 7 = *Strongly Agree*.

Individual Nonzero-Sum Beliefs Scale. The items on this scale assessed group-related beliefs with an emphasis on an individual's point of view. For comprehensibility, I have termed this set of items the *Individual Nonzero-Sum Beliefs Scale*. The items are listed in full in Table 1.

Table 1

Items of the Individual Nonzero-Sum Beliefs Scale

Item	Item Text
1	When people reach agreements in conflicts, it is usually possible to reach agreements that are equally beneficial to all.
2	It is usually possible to resolve disagreements in mutually beneficial ways.
3	When a conflict arises, it is possible to find a good solution for all parties involved.
4	The outcome of group conflict can, in most cases, be a win-win for all groups involved.
5	When difficult situations arise between two groups, it is usually possible to find a good solution for both groups.
6	In most cases of conflict, there need not be winners and losers.
7	When disagreements arise, the outcome can be satisfactory to all parties.
8	It is usually possible to resolve disagreements in mutually beneficial ways.

Note. All items were rated on a 7-point Likert scale from 1 = *Strongly disagree* to 7 = *Strongly agree*. Higher scores indicate stronger endorsement of individual nonzero-sum beliefs.

The participants' responses were averaged to form a single Individual Nonzero-Sum Beliefs Scale score per participant. Individuals scoring high on this subscale believe that cooperation and mutual benefit in their personal interactions are not only possible but preferable to competition or zero-sum thinking.

Individual Nonzero-Sum Beliefs Scale scores in this sample ($N = 202$, $M = 4.70$, $SD = 0.89$) ranged from 2 (0.5% of the participants) to 7.00 (1.5% of the participants). In the present study Cronbach's α was .88.

Social Nonzero-Sum Beliefs Scale. The items on this scale referred to beliefs related to attitudes to potential conflicts within society, with the emphasis being on the perception of the community. This set of items I have called the *Social Nonzero-Sum Beliefs Scale* (see Table 2).

Higher values reflect a stronger belief that society as a whole functions best through cooperation and mutual gain, rather than through competition or *win-lose* dynamics.

The participants' responses were averaged to form a single Social Nonzero-Sum Beliefs Scale score for each participant. Social Nonzero-Sum Beliefs Scale scores in this sample ($N = 202$, $M = 5.79$, $SD = 0.87$) ranged from 2.75 (0.5% of the participants) to 7.00 (8.4% of the participants). In the present study Cronbach's α equalled .87.

Table 2*Items of the Social Nonzero-Sum Beliefs Scale*

Item	Item Text
1	Supporting the weak does not mean that the strong are worse off.
2	Improving the situation of disadvantaged groups is beneficial for society as a whole.
3	When groups with lower status make financial gains, higher-status groups usually also gain.
4	Improving the education of disadvantaged individuals benefits society as a whole.
5	Improving the financial situation of disadvantaged individuals benefits society as a whole.
6	Allowing disadvantaged groups more rights does not come at the expense of wealthier groups.
7	Rights for disadvantaged groups also benefit wealthier groups.
8	Improving the rights of minorities is good for society as a whole.

Note. All items were rated on a 7-point Likert scale from 1 = *Strongly disagree* to 7 = *Strongly agree*. Higher scores reveal more pronounced preference for social nonzero-sum beliefs.

Outcome Expectancy Scale

Positive outcome expectancies were evaluated by the scale Positive Outcome Expectancies, which comprised three items ($\alpha = .88$ in the present study). To measure participants' anticipations that reducing one's own consumption should result in meaningful and positive environmental outcomes, I adapted the Outcome Expectancy Scale for children employed in the study by Collado and Evans (2019). All three items were phrased as "if-then" statements according to the definition of the construct of outcome expectancies of

Fouad and Guillen (2006) and were partially generated with the help of OpenAI (2024). For a complete overview of the items, see Table 3.

Table 3

Items of the Positive Outcome Expectancies Scale

Item	Item Text
1	If I, as a consumer, actively reduce my consumption, I make a significant contribution to the fight against climate change.
2	If I, as a consumer, lead a more sufficient and simpler lifestyle, this will play a crucial role in curbing climate change.
3	If I stop buying things I don't need, it will make a big difference to the environment.

Note. High scores indicate anticipations that one's pro-environmental actions are effective and lead to tangible positive environmental outcomes.

All items on the scale were assessed on a 7-point Likert-type scale ranging from 1 = *Strongly Disagree* to 7 = *Strongly Agree*. The responses were then averaged to form a single Positive Outcome Expectancy Scale score per participant. Positive Outcome Expectancies scores in this sample ($N = 202$, $M = 4.90$, $SD = 1.34$) varied from 1.33 (1.0% of the participants) to 7.00 (8.4% of the participants).

Willingness to Reduce Consumption Scale

The Willingness to Reduce Consumption Scale applied in this study was composed of four items ($\alpha = .87$ in the current study). Items 1 and 3 were based on and slightly adapted from the Willingness to Sacrifice for the Environment Scale used in the research paper by Davis et al. (2011). Items 2 and 4 were generated within the conceptual framework of Items 1

and 3 by means of OpenAI (2024). The items investigated the readiness of participants to dispense with certain conveniences to benefit the environment (see Table 4).

Table 4

Items of the Willingness to Reduce Consumption Scale

Item	Item Text
1	I am willing to give up things I enjoy doing if they harm the environment.
2	I am willing to reduce my daily consumption for the sake of the environment, even if I'm not thanked for my efforts.
3	I am willing to refrain from activities that may harm the environment, even if they are culturally or socially accepted practices.
4	I am willing to live a more sufficient lifestyle and change my habits accordingly to reduce a negative impact of my behaviour on the environment.

Note. Higher values on this scale indicate a greater willingness to reduce personal consumption and change one's consumer behaviour for the sake of the environment.

All items were answered to on a 7-point Likert-type scale from 1 = *Strongly Disagree* to 7 = *Strongly Agree* and were subsequently averaged to form a single Willingness to Reduce Consumption Scale score. Willingness to Reduce Consumption scores in this sample ($N = 202$, $M = 5.31$, $SD = 0.94$) varied from 2.25 (0.5% of the participants) to 7.00 (4.5% of the participants).

Procedure

At the beginning of the survey the participants were informed of the scientific background of the study and were asked to give their informed consent to the use of their answers for academic research; if they declined to consent, they were directed to an end page. Apart from demographic information such as age, gender, highest level of education and

nationality, the participants were requested to estimate their subjective socio-economic status on a visual leader from 1 to 10 (Adler et al., 2000) and their current financial situation on a 7-point Likert-scale from 1 = *overwhelmed* to 7 = *completely relaxed*. This data was required to test and statistically control for possible interactions with the predictor and the mediator variables as part of the subsequent statistical analyses.

Data Analysis

The hypotheses were statistically tested by means of mediated regression analyses whereby the Outcome Expectancy Score was considered a moderator, and the Nonzero-Sum Beliefs Scores as a predictor. The outcome variable was the Willingness to Reduce Consumption Score. There were no cut-off values. The statistical analyses were conducted with the aid of IBM SPSS Statistics (version 29.0) and PROCESS (version 4.3) software by Hayes (2022).

The data collected from the participants ($N = 202$) in the online survey was examined by means of mediation analyses using ordinary least squares (OLS) regression, with bootstrapping (5.000 samples) to estimate confidence intervals for the indirect effect. The mediation analyses were conducted separately for the predictor individual nonzero-sum beliefs, and for the predictor social nonzero-sum beliefs, respectively. Each mediation analysis comprised three regression models. The first model tested the effect of the independent variables (IVs) individual/social nonzero-sum beliefs on the mediator (M) outcome expectancy (*a path* in Figure 1). The second regression model investigated the effects of both the IVs each and of the M on the dependent variable (DV) willingness to reduce consumption (*b path* and *c' path* in Figure 1). The indirect effect (*a path* $\times$ *b path* in Figure 1) was assessed by a third regression model employing bias-corrected bootstrap confidence intervals to quantify how much of the relationship between readiness for consumption reduction and individual nonzero-sum beliefs, and between readiness for

consumption reduction and social nonzero-sum beliefs, respectively, was explained through outcome expectancy as a mediator.

Results

Preliminary Analyses

Prior to testing the hypotheses, I conducted preliminary analyses to examine descriptive statistics and bivariate correlations among the study variables. Within this framework, I calculated Pearson correlations by means of SPSS in order to test and highlight any statistically significant associations between demographic and socioeconomic variables and the main theoretical constructs (see Table 5).

Participants' educational level was positively correlated with social nonzero-sum beliefs ($r = .27, p < .01$) and readiness for consumption reduction ($r = .28, p < .01$). Subjective socioeconomic status was moderately associated with both participants' educational level ($r = .33, p < .01$) and subjective current financial situation ($r = .40, p < .01$), supporting the construct validity of these measures. A weak yet statistically significant positive correlation was observed between participants' subjective socioeconomic status and their readiness to reduce consumption ($r = .16, p < .05$), indicating that individuals who perceive themselves as higher in the social hierarchy may demonstrate a greater willingness to engage in consumption-related behavioural changes for environmental reasons.

Table 5
Descriptive Statistics and Correlations for Study Variables

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7
1. Age	41.91	16.08	—						
2. Education	6.36	1.32	−.08	—					
3. Subjective Socio-Economic Status	6.60	1.38	.11	.33**	—				
4. Subjective Current Financial Situation	4.49	1.19	.06	.08	.40**	—			
5. Individual Nonzero-Sum Beliefs	4.70	0.89	−.05	.05	−.03	−.02	—		
6. Social Nonzero-Sum Beliefs	5.79	0.87	−.09	.27**	.10	.02	.39**	—	
7. Positive Outcome Expectancy	4.90	1.34	.08	.07	.09	.01	.19**	.26**	—
8. Willingness for Consumption Reduction	5.31	0.94	−.01	.28**	.16*	.04	.21**	.34**	.36**

Note. $N = 202$ (except Age: $N = 201$ and Education: $N = 199$). All correlations are Pearson coefficients, rounded to two decimal places. Education was treated as a continuous variable (1–7, from lowest to highest educational attainment). The input of participants selecting “Other Education” ($n = 3$), Nationality (nominal variable) and Gender (categorical variable) were excluded from the analysis for not being meaningfully comparable to continuous scale measures. Cronbach’s alpha (α) values are reported in the text for all multi-item scales.

** $p < .01$, * $p < .05$.

Main Results

The results in this section are divided into two main categories, individual nonzero-sum beliefs and social nonzero-sum beliefs. Since each set of items on nonzero-sum beliefs – individual as well as social – was examined in its function as a predictor in two separate mediation analyses in terms of identical assumptions, I have outlined the results of the analyses according to (1) the type of nonzero-sum beliefs, and (2) the hypothesis being tested.

Individual Nonzero-Sum Beliefs

Prediction of Readiness for Consumption Reduction by Individual Nonzero-Sum Beliefs (Total Effect). The first hypothesis predicted that stronger nonzero-sum beliefs would be associated with greater readiness for consumption reduction (Path *c* in Figure 1). In order to test the hypothesis for statistical significance, a regression analysis was conducted as part of the mediation analysis (Hayes, 2022), to examine the total effect of individual nonzero-sum beliefs on willingness to reduce consumption. The results indicated a significant positive effect, $B = .22$, $SE = .07$, $\beta = .21$, $t(200) = 3.06$, $p = .003$, 95% CI [0.08, 0.37]. The model was statistically significant, $F(1, 200) = 9.36$, $p = .003$, explaining 4.47% of the variance ($R^2 = .045$). This result supports the assumption that the two variables are positively correlated, meaning that individuals with stronger individual nonzero-sum beliefs tend to exhibit greater readiness to reduce their consumption.

Prediction of Positive Outcome Expectancies by Individual Nonzero-Sum Beliefs. According to Hypothesis 2, higher levels of nonzero-sum beliefs were assumed to be positively associated with higher outcome expectancies (Path *a* in Figure 1). The results of a regression analysis conducted to assess the relationship between individual nonzero-sum beliefs and positive outcome expectancies confirmed the expectations, showing a significant positive effect, $B = .29$, $SE = .10$, $\beta = .19$, $t(200) = 2.73$, $p = .007$, 95% CI [0.08, 0.49]. The regression model was statistically significant, $F(1, 200) = 7.48$, $p = .007$, accounting for

3.60% of the variance ($R^2 = .036$), In other words, stronger individual nonzero-sum beliefs were positively linked to higher outcome expectancies regarding consumption reduction.

Prediction of Willingness to Reduce Consumption by Outcome Expectancies.

Hypothesis 3 proposed that greater positive outcome expectancies would be positively correlated with a higher willingness to reduce consumption (Path *b* in Figure 1). The regression analysis supported that assumption by revealing a significant effect, $B = .23$, $SE = .05$, $\beta = .34$, $t(199) = 5.04$, $p < .001$, 95% CI [0.14, 0.33], confirming that higher outcome expectancies are positively associated with greater readiness for consumption reduction. The overall model predicting willingness to reduce consumption from individual nonzero-sum beliefs and positive outcome expectancies was statistically significant, $F(2, 199) = 17.96$, $p < .001$, explaining 15.29% of the variance ($R^2 = .153$).

Mediating Role of Outcome Expectancies Between Individual Nonzero-Sum Beliefs and Readiness for Consumption Reduction. The mediation hypothesis stated that the relationship between individual nonzero-sum beliefs and willingness to reduce consumption should be mediated by positive outcome expectancies (indirect effect). To test this effect, a mediation regression analysis (Hayes, 2022) was conducted with personal outcome expectancies as the mediator. The analysis confirmed the mediation hypothesis. Figure 2 illustrates the mediation effects via visual representation of the regression lines.

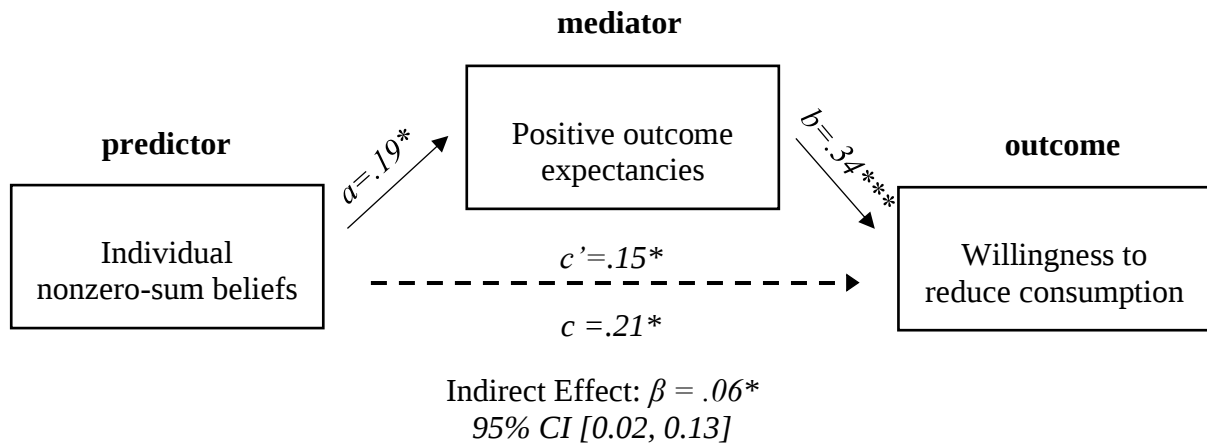
The direct effect (Path *c'* in Figure 1) of individual nonzero-sum beliefs on willingness to reduce consumption remained significant after controlling for personal outcome expectancies, $B = .16$, $SE = .07$, $\beta = .15$, $t(199) = 2.22$, $p = .027$, 95% CI [0.02, 0.29].

The indirect effect of individual nonzero-sum beliefs on willingness to reduce consumption through personal outcome expectancies was also significant, $B = .07$, $SE = .03$, $\beta = .06$, 95% CI [0.02, 0.13].

The mediation effect accounted for 30.1% of the total effect.

Figure 2

Individual Nonzero-Sum Beliefs Predict Greater Willingness to Reduce Consumption through Positive Outcome Expectancies



Note. The numbers indicate the standardized regression coefficients. *** $p < .001$, * $p < .01$, * $p < .05$

The fact that both the direct effect and the indirect effect proved to be significant indicates partial mediation. Importantly, the significant indirect effect confirms that positive outcome expectancy plays an important role in the relationship between individual nonzero-sum beliefs and one's willingness to reduce consumption. More precisely, positive outcome expectancies predicted 30.1% of the variance of individuals' willingness to limit their consumption.

Social Nonzero-Sum Beliefs

Prediction of Readiness for Consumption Reduction by Social Nonzero-Sum Beliefs (Total Effect). As in the case with individual nonzero-sum beliefs, the first hypothesis was based on the proposition that stronger nonzero-sum beliefs should predict greater readiness for consumption reduction (Path c in Figure 1). The results indicated a

positive correlation, $B = .37$, $SE = .07$, $\beta = .34$, $t(200) = 5.15$, $p < .001$, 95% CI [0.22,0.51], revealing a positive correlation of social nonzero-sum beliefs with participants' greater readiness to reduce their consumption. The regression analysis within the scope of the mediation analysis (Hayes, 2022) revealed the total effect of social nonzero-sum beliefs on willingness to reduce consumption to be statistically significant with the model $F(1, 200) = 26.54$, $p < .001$ explaining 11.7% of the variance ($R^2 = .117$).

Prediction of Positive Outcome Expectancies by Social Nonzero-Sum Beliefs.

Hypothesis 2 proposed that social nonzero-sum beliefs would be positively associated with stronger positive outcome expectancies (Path *a* in Figure 1). Again, a regression analysis conducted to assess the relationship between social nonzero-sum beliefs and positive outcome expectancies confirmed this expectation, demonstrating a significant positive effect, $B = .40$, $SE = .11$, $\beta = .26$, $t(200) = 3.81$, $p < .001$, 95% CI [0.19, 0.61]. $F(1, 200) = 14.53$, $p = .002$, with the regression model accounting for 6.8% of the variance ($R^2 = .068$). In other words, stronger social nonzero-sum beliefs were linked to higher outcome expectancies regarding consumption reduction.

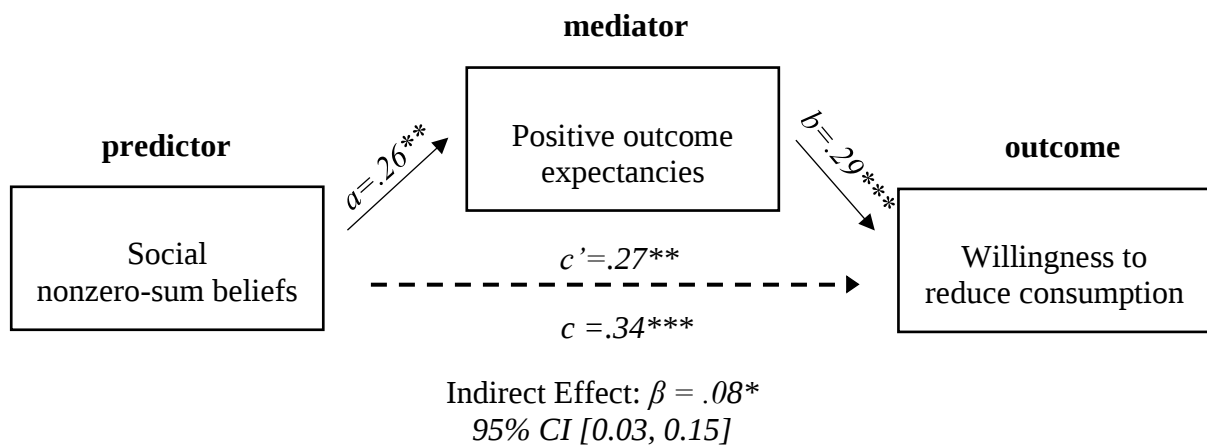
Prediction of Willingness to Reduce Consumption by Outcome Expectancies.

According to Hypothesis 3, more pronounced positive outcome expectancies should be positively associated with greater willingness to reduce consumption (Path *b* in Figure 1). The overall model predicting willingness to reduce consumption from social nonzero-sum beliefs and positive outcome expectancies was statistically significant, $F(2, 199) = 24.52$, $p < .001$, explaining 19.8% of the variance ($R^2 = .198$). Confirming the expectation that individuals with higher outcome expectancies are more likely to be willing to reduce their consumption, the significant effect equated to $B = .20$, $SE = .05$, $\beta = .29$, $t(199) = 4.47$, $p < .001$, 95% CI [.11, .30], meaning that the correlation between outcome expectancies and willingness for consumption reduction was positive.

Mediating Role of Outcome Expectancies Between Social Nonzero-Sum Beliefs and Readiness for Consumption Reduction. Corresponding to the theoretical framework outlined in this thesis, the mediation hypothesis predicted that positive outcome expectancies would mediate the relationship between social nonzero-sum beliefs and willingness to reduce consumption (indirect effect). The mediation analysis confirmed the mediation hypothesis also in this case. The relationships within the mediation model are visualized in Figure 3.

Figure 3

Social Nonzero-Sum Beliefs Predict more Willingness to Reduce Consumption through Positive Outcome Expectancies



Note. The numbers indicate the standardized regression coefficients. $***p < .001$, $**p < .01$, $*p < .05$

In resemblance to individual nonzero-sum beliefs, the direct effect (Path c' in Figure 1) of social nonzero-sum beliefs on willingness to reduce consumption proved to be significant after controlling for personal outcome expectancies, $B = .29$, $SE = .07$, $\beta = .27$, $t(199) = 4.04$, $p = .001$, 95% CI $[.15, .42]$.

The indirect effect of social nonzero-sum beliefs on willingness to reduce consumption through personal outcome expectancies was also significant, $B = .08$, $SE = .03$, $\beta = .08$, 95% CI [0.03, 0.15].

The proportion mediated, which is the indirect effect divided by the total effect, amounted to 22.4% of the total effect. This result indicates that, similarly to individual nonzero-sum beliefs, social nonzero-sum beliefs influence people's willingness to limit their consumption through their positive outcome expectancies, but to a smaller extent than individual nonzero-sum beliefs.

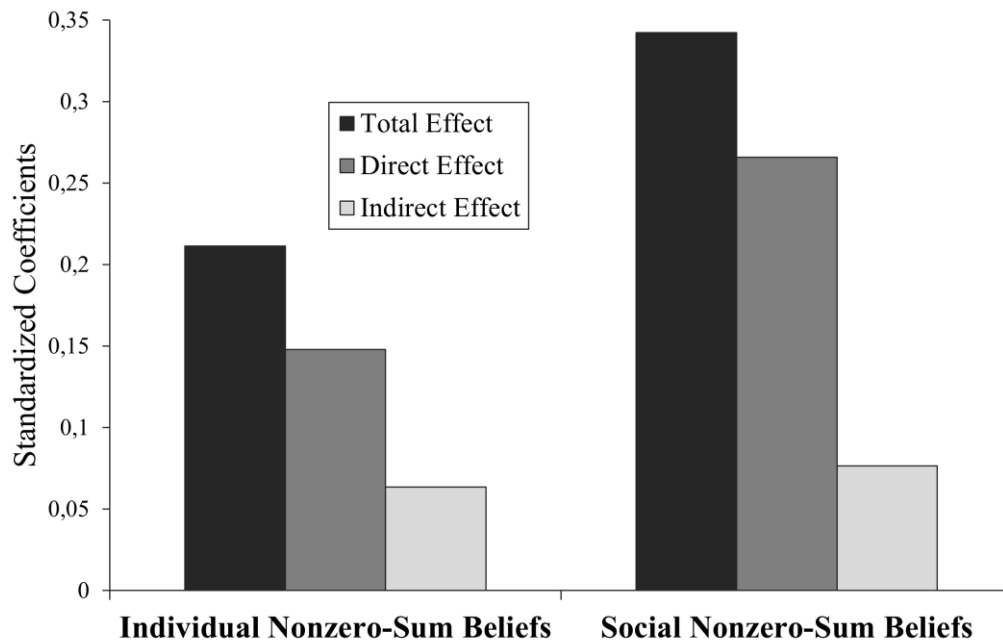
Individual versus Social Nonzero-Sum Beliefs

Both mediation models – with individual nonzero-sum beliefs as the predictor and with social nonzero-sum beliefs as the predictor – revealed significant effects as proposed by each of the four hypotheses. Figure 4 represents a visual comparison of the mediation effects in the two mediation models according to the type of nonzero-sum beliefs.

As a predictor in the mediation model, social nonzero-sum beliefs explain nearly twice as much variance in positive outcome expectancy in comparison to individual nonzero-sum beliefs (6.8% vs. 3.6%) – an indication that social nonzero-sum beliefs have a stronger influence on positive outcome expectancies. Social nonzero-sum beliefs also explain more variance (19.8%) in people's willingness to limit their consumption than individual nonzero-sum beliefs do (15.3%). Furthermore, social nonzero-sum beliefs ($\beta = .34$) have a stronger total effect on willingness to reduce consumption than individual nonzero-sum beliefs ($\beta = .21$). In line with that, model fit for total effect is better for social nonzero-sum beliefs ($R^2 = .117$) than for individual nonzero-sum beliefs ($R^2 = .045$), meaning that social nonzero-sum beliefs also account for more variance in willingness to reduce consumption.

Figure 4

Comparison of Mediation Effects for Individual Nonzero-Sum Beliefs and Social Nonzero-Sum Beliefs



Note. All six effects were statistically significant. Please refer to Figure 2 and Figure 3 for detailed p-values per effect.

Positive outcome expectancy was a stronger predictor of willingness to reduce consumption ($\beta = .29$ when modelled with social nonzero-sum beliefs; $\beta = .34$ when modelled with individual nonzero-sum beliefs) than either social ($\beta = .27$) or individual nonzero-sum beliefs ($\beta = .15$). Nevertheless, the effect of social nonzero-sum beliefs on willingness to reduce consumption is again stronger in comparison to individual nonzero-sum beliefs.

Both mediation models show significant mediation (confidence intervals do not include zero). Individual nonzero-sum beliefs are mediated more strongly (30.1%) than social nonzero-sum beliefs (22.4%), suggesting that the effect of personal nonzero-sum beliefs on

willingness to reduce consumption is more reliant on on positive outcome expectancies. At the same time, social nonzero-sum beliefs have a more pronounced direct impact on willingness to reduce consumption than individual nonzero-sum beliefs ($\beta = .27$ for social vs. $\beta = .15$ for individual nonzero-sum beliefs).

Discussion

The primary goal of this study was to investigate how nonzero-sum beliefs relate to individuals' willingness to reduce their consumption for the sake of the environment, and whether this relationship is mediated by positive outcome expectancies. The core idea of this research is that individuals who perceive societal and personal interests as compatible rather than conflicting, are more likely and more inclined to view sustainable consumption as beneficial – or a *win-win* – for themselves as well as for everyone else, and therefore not as a personal loss or sacrifice. Drawing on this theoretical assumption, I developed and tested a mediation model to determine whether nonzero-sum beliefs – both personal and socially oriented – positively predict individuals' readiness for consumption reduction, directly and indirectly through the anticipation of positive outcomes.

My findings provide empirical support for this model. Individual and social nonzero-sum beliefs were found to significantly predict participants' readiness to reduce consumption, with social nonzero-sum beliefs showing a particularly strong effect ($\beta = .34$) compared to individual beliefs ($\beta = .21$). In addition, both types of nonzero-sum beliefs were positively associated with outcome expectancies, which in turn significantly predicted willingness to reduce consumption. Mediation analyses confirmed that outcome expectancies partially mediated the relationship between nonzero-sum beliefs and willingness for consumption reduction for individual as well as for social nonzero-sum beliefs. These results underscore the relevance of anticipating meaningful shared gains when encouraging sustainable consumer behaviour and suggest that lay beliefs characterized by mutual interdependence and

cooperation may be of essential importance in pro-environmental attitudes and behaviour patterns.

Nonzero-Sum Beliefs Predict Willingness to Reduce Consumption

Drawing on the theoretical framework of Crocker et al. (2017), nonzero-sum beliefs represent the mindset, or lay theory, that social interactions and resource distributions do not have to be competitive or detrimental to anyone; instead, any conflicts of interests can essentially be resolved through cooperation and solutions that can ultimately lead to mutually beneficial outcomes. The present study extends this theoretical framework by examining the role of nonzero-sum beliefs in influencing pro-environmental behaviour, specifically one's willingness to reduce consumption. Consistent with the perspective of Crocker et al. (2017), the results of the study indicate that individuals who sustain nonzero-sum beliefs are more inclined to consumer behaviour that benefits both themselves and the larger community in the environmental context. In other words, the more pronounced the nonzero-sum beliefs that people hold, the more likely people are to reduce their environmental impact by reducing their consumption in order to reduce their negative impact on the environment and thus benefit everyone including themselves as part of the ecosystem. This finding of the study aligns thoroughly with the essence of the ecosystem motivation, or the central component of nonzero-sum beliefs, "what comes around, goes around" (Crocker et al., 2017), where taking care of one another signifies benefits for everyone, for everyone is being part of the ecosystem.

Furthermore, the study at hand has revealed that the effect of nonzero-sum beliefs on one's willingness to reduce one's consumption remains significant even when controlling for positive outcome expectancies – which is an additional confirmation of the independent role individuals' nonzero-sum beliefs play as a lay, or naïve, theory. This in turn lends empirical support to the concept that nonzero-sum beliefs are of key importance in situations involving

social dilemmas, and especially so in the context of the environment where people are inevitably dependent on mutual cooperation.

The findings of the present study also offer initial insights into the possible different functions of individual and social nonzero-sum beliefs in predicting readiness to reduce consumption. Notably, the examined data shows that social nonzero-sum beliefs are more strongly correlated with consumption reduction when compared to individual nonzero-sum beliefs. One possible theoretical explanation could be that the form of nonzero-sum beliefs that emphasizes social interdependence in the broader community, social nonzero-sum beliefs, has a stronger predictive power for pro-environmental behaviour in the context of environmental issues, because in this context the benefits of reduced consumption are markedly inherently shared (improved environmental quality, sustainable resource use, etc.). In social dilemmas, the personal cost of cooperation can be a significant barrier. As a result, if individuals do not see a clear “bigger picture”, their beliefs about shared benefits might become less influential in guiding their behaviour. Yet, when the stakes involve balancing self-interest against collective interest in the environmental context, people with stronger social nonzero-sum beliefs might be more inclined to perceive and concentrate on mutual gain and shared outcomes. In contrast, individual nonzero-sum beliefs, although still predictive, tend to focus on personal outcomes on a smaller scale and may not capture the broader, communal incentive structure of pro-environmental behaviour as effectively. In this sense, it appears that the environmental context serves as the outcome domain where the effects of social nonzero-sum beliefs are manifested more distinctly. As such, the relatively weaker influence of individual nonzero-sum beliefs underscores the idea that pro-environmental behaviour is predominantly driven by social considerations. In this vein, it is also conceivable that social nonzero-sum beliefs might influence one’s willingness to reduce one’s consumption through other pathways, such as social norms or group dynamics, or that

the latter play a more important role in pro-environmental behaviour in comparison to individual nonzero-sum beliefs.

Positive Outcome Expectancy as a Powerful Mediator

Individuals' positive anticipations about the benefits or outcomes of reducing consumption – such as environmental improvements, cost savings, or an enhanced lifestyle over the long run – turned out to be a particularly potent predictor of behaviour change in the study at hand. Specifically, although nonzero-sum beliefs incorporate the cooperative mindset that allows for the perception of *win-win* solutions as part of the “bigger picture”, it is the outcome expectation that these benefits would actually materialize that ultimately tends to convince individuals to reduce their consumption. This finding aligns to previous research of the effect of outcome expectancy as a central motivational predictor of behaviour across domains (Bohlen et al., 2022; Hagger, 2025; Reesor et al., 2017; Thompson-Hollands et al., 2014; Williams et al., 2005) but also with the results of the studies of Collado and Evans (2019) and (Gregersen et al., 2021).

There are several possible explanations for this empirical connection in the present study. Individuals with strong nonzero-sum beliefs tend to hold a cooperative mindset that emphasizes interconnectedness and cooperation. This attitude likely sustains and furthers a more optimistic view of the efficacy of collective and individual action. If one believes that a *win-win* is possible and has experienced this in social or environmental contexts, it becomes cognitively and emotionally easier to expect that reducing one's consumption should also lead to tangible improvements. As Crocker and Canevello (2018) argue, nonzero-sum beliefs are reinforced by experiences in which prosocial action leads to positive outcomes, proposing that individuals with nonzero-sum beliefs have already made positive experiences, which serve as the cognitive foundation for expecting successful outcomes from future cooperative behaviour.

This connection is also supported by studies, which have demonstrated that people who believe in the effectiveness of environmental actions – both individually and collectively – are more likely to act in a sustainable manner (Collado & Evans, 2019; Gregersen et al., 2021). In the present study, participants with high levels of nonzero-sum beliefs were more inclined to expect that reducing their consumption would make a positive difference. This psychological mechanism appears to be particularly important for people with strong individual nonzero-sum beliefs than for those with social nonzero-sum beliefs, as the mediating role of outcome expectancy was more pronounced in those participants. The latter suggests that for those who hold strong personal convictions about mutually beneficial interactions, the anticipation that their own sustainable consumption will lead to personal or tangible benefits (health, well-being, financial savings) is especially crucial. Interestingly, the research paper of Gregersen et al. (2021) found a stronger moderating effect for collective expectancy than for individual expectancy. According to their report, when individuals are worried about climate change, it is their belief that collective actions will yield significant benefits that more strongly influences their energy-saving behaviours. Taken together, the finding of Gregersen et al. (2021) and the results of the present study imply that while collective outcome expectancies are important when general environmental concerns such as worry about climate change are at play, the translation of individual nonzero-sum beliefs into intentions depends predominantly on personal outcome expectations. One possible explanation is that environmental worry might activate broader, community-focused concerns, thus making shared benefits (and possible losses) more salient. At the same time, individual nonzero-sum beliefs may require a more pronounced outcome on a personal level – as, for example in the context of interpersonal relationships (Crocker et al., 2017) – to lead to readiness for a behaviour change. Again, if personal nonzero-sum beliefs possibly rely

more on individual expectations about outcomes, then social beliefs could influence readiness through other social processes like social comparison.

Taken together, the results support the theoretical notion that nonzero-sum beliefs not only provide a motivational foundation for sustainable consumer behaviour but also help shape cognitive anticipations of the outcomes of such behaviour. Outcome expectancy thus serves as a bridge between lay beliefs and readiness for pro-environmental behaviour enhancing the effect of nonzero-sum beliefs on readiness to reduce consumption by reinforcing the expectation that these efforts will have positive consequences.

Limitations of the Study

Several limitations of the current study warrant consideration and consequently caution when generalizing its findings. First, although the sample size ($N = 202$) although the sample size ($N = 202$) is statistically adequate and provides sufficient power to detect medium effects (Cohen, 2013), the generalizability of the findings may still be limited by sample characteristics. Over 75% of participants identified as female, which creates an imbalance that could skew the results, especially if gender-related differences exist in environmental attitudes, outcome expectancies, or nonzero-sum beliefs. A more gender-balanced sample would allow for the examination of potential gender effects and would enhance the external validity of the results. The sample was also relatively homogeneous in terms of education and subjective socioeconomic status, which may have influenced the strength of the observed relationships. As educational level and perceived social status were positively correlated with both social nonzero-sum beliefs and willingness for consumption reduction, future studies should aim to recruit more socioeconomically diverse samples to explore how these background factors interact with psychological constructs like nonzero-sum beliefs and outcome expectancies. More broadly, future research should strive for larger and more demographically varied samples in terms of gender, age and education to ensure that the

findings are generalizable across different subpopulations and social contexts. A larger, diversified sample would namely reduce confounding factors like social trust, political ideologies, cultural heritage and ethnic background to ensure that the results are representative of a broader population. Second, the study at hand relied exclusively on data from an online self-report survey. This method may have allowed for self-report biases (social desirability, acquiescence bias, and self-selection to name a few), potentially inflating or otherwise skewing the observed relationships among nonzero-sum beliefs, outcome expectancies, and willingness to reduce consumption. To reduce the impact of such biases, future studies should consider incorporating procedural remedies like varied item formats and statistical controls such as Harman's single-factor test. Additionally, using multi-method designs – for instance, combining self-report data with behavioural tasks or peer reports – would help to triangulate the findings and reduce the risk of inflated correlations due to common method bias. Moreover, the study did not include any attention checks, which is why it cannot be ruled out that some participants did not assess the items thoroughly or conscientiously. Third, the cross-sectional design of the study largely limits the ability to draw causal inferences. Although the statistical mediation model is theoretically sound, it cannot conclusively demonstrate the temporal consequence of nonzero-sum beliefs, outcome expectancies, and readiness for limiting one's consumption. Longitudinal or experimental designs would be beneficial for establishing the directionality of the relationships between the variables, for example under controlled conditions. Fourth, although all of the employed scales delivered very good reliability, the possibility of measurement error and shared method variance still poses a concern. Future studies might employ multimethod approaches, including objective behavioural measures, to further validate the constructs. Finally, given that the study was conducted within a specific cultural context, the generalizability of the results to other settings may be limited. Replicating this research in more diverse contexts

could provide a deeper understanding of how nonzero-sum beliefs and outcome expectancies operate across different populations.

Relevance of the Study

The present study offers several notable strengths. First, it makes a significant contribution by extending the theoretical framework of nonzero-sum beliefs (Crocker et al., 2017). By examining both individual and social forms of these beliefs in relation to environmentally relevant attitudes, the study provides a novel perspective to understanding the cognitive mechanisms underlying consumers' readiness for voluntary limitations within the context of environmental social dilemmas. It is simultaneously the first one to scientifically demonstrate the impact of the *win-win* aspects of nonzero-sum beliefs in a consumption related setting, thus delivering a potential solution to the environmental and finite resources social dilemmas.

Second, the study contributes to the existing research on outcome expectancies as drivers of changes in health behaviours by delivering empirical evidence that positive outcome expectancies mediate the relationship between nonzero-sum beliefs and willingness to reduce consumption, thus highlighting the central role of outcome anticipations in predicting change in behavioural environmental attitudes. Along with the findings presented in the research articles of Collado and Evans (2019) and Gregersen et al. (2021), my results underline the urgency of taking outcome expectancy into account when predicting, explaining and evaluating individuals' readiness to limit their consumption for environmental reasons.

Third, the study is characterized by the use of robust statistical methods, including bootstrapping techniques, similar to the statistical approach used in the study of Collado and Evans (2019), to ensure the reliability of the findings. Fourth, the focus on consumption reduction, e.g., a behaviour directly linked to environmental sustainability, strengthens the practical relevance of the study. The results have direct implications for targeted

interventions by providing insights for potential incentives aimed at fostering sustainable behaviour.

Finally, by integrating both social and individual perspectives on nonzero-sum beliefs, the study captures the complexity of environmental related consumer behaviour. In this way it expands the existing knowledge on nonzero-sum beliefs in romantic relationships to new conceptual fields and makes way for new, promising research on cooperation in social dilemma situations.

Implications for Future Research

Congruent with previous research (Bandura, 1977, 1986; Crocker & Canevello, 2008; Crocker et al., 2017), the present study supports the assumption that individuals with strong nonzero-sum beliefs are generally more willing to reduce their consumption for environmental reasons. This contributes to the postulation that nonzero-sum beliefs constitute a cooperative mindset, which can promote collectively oriented behaviour in domains such as sustainable and responsible consumption. Previous studies have shown that individuals who perceive social interactions from a cooperative perspective tend to engage more in helping behaviours and are more responsive to challenges in an interpersonal context (Crocker & Canevello, 2008; Crocker et al., 2017). Adding to these insights, the present findings also demonstrate that along with nonzero-sum beliefs, it is also the perceived likelihood and significance of positive outcomes resulting from one's behaviour that functions as a facilitator in individuals' readiness to consume in a sustainably way – a notion consistent with Bandura's (1986) emphasis on the motivational role of outcome expectancy in social cognitive theory.

Interestingly, participants' educational level and subjective socioeconomic status showed small to moderate positive associations with both nonzero-sum beliefs and readiness for consumption reduction. These results suggest that individuals with higher education or a

higher perceived social status may be more inclined to exhibit cooperative mindsets and to engage in sustainable consumer behaviours. Future research should investigate whether and how educational background and subjective social standing influence the development of nonzero-sum beliefs and the formation of positive outcome expectancies. Individuals with higher education or perceived higher social status may be more likely to endorse cooperative worldviews and anticipate meaningful outcomes from responsible consumption – possibly due to greater access to information on overconsumption, increased environmental efficacy, or more frequent exposure to sustainability-related discourse in general.

Taken together, the findings of the study at hand have several implications. First, they lend empirical support to Crocker's (2017) notion that nonzero-sum beliefs can promote cooperative behaviour and, specifically that they do so in the context of environmental social dilemmas. Potential studies may apply different methods of inducing nonzero-sum beliefs individually and in a community setting in order to gain insights into the emergence of those beliefs and their individual and social aspects. This could involve laboratory settings, which control for the previously mentioned confounding factors such as social trust, political ideologies and cultural, financial and educational background. The settings could involve multi-informant assessments of pro-environmental behaviours of participants with previously assessed baseline levels of individual and social nonzero-sum beliefs. Considering potential confounders is important, as they may not only influence the development of nonzero-sum beliefs but also affect how these beliefs relate to behaviour, i.e. act as moderators or mediators. Future research should control for or examine these factors to better isolate the unique contribution of nonzero-sum beliefs, especially in terms of their individual and social aspects.

The results of the study at hand also indicate that the overall impact of nonzero-sum beliefs on pro-environmental behaviour is significantly amplified when coupled with

individuals' positive outcome expectancies from their readiness to limit their consumption. Although the study focused on the predictive power of nonzero-sum beliefs as conceptualized by Crocker et al. (2017), it is obvious that these beliefs do not operate in isolation. This suggests that interventions promoting pro-environmental behaviour and aimed at reducing overconsumption might benefit from communicating and demonstrating the potential specific results of individuals' efforts on both personal and collective level.

In conclusion, my research has advanced our understanding of nonzero-sum beliefs by situating them within a novel theoretical and empirical framework. In doing so, it has added to scientific discourse on lay theories, social dilemmas and outcome expectancy by providing evidence for the pathways through which nonzero-sum beliefs influence sustainable consumer behaviour. As such, it offers considerable promise for future research related to the possible solutions to the phenomenon of overconsumption and the tackling of other pressing environmental challenges.

References

- Adler, N. E., Epel, E. S., Castellazzo, G., & Ickovics, J. R. (2000). Relationship of subjective and objective social status with psychological and physiological functioning: Preliminary data in healthy, White women. *Health Psychology, 19*(6), 586–592. <https://doi.org/10.1037/0278-6133.19.6.586>
- Balliet, D., & Van Lange, P. A. M. (2012). Trust, conflict, and cooperation: A meta-analysis. *Psychological Bulletin, 139*(5), 1090–1112. <https://doi.org/10.1037/a0030939>
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review, 84*(2), 191–215. <https://doi.org/10.1037/0033-295x.84.2.191>
- Bandura, A. (1986). *Social foundations of thought and action: A social-cognitive view* (1st ed.). Prentice Hall.
- Bandura, A. (2001). Social cognitive theory: An agentic perspective. *Annual Review of Psychology, 52*(1), 1–26. <https://doi.org/10.1146/annurev.psych.52.1.1>
- Blankenberg, A., & Alhusen, H. (2019). On the determinants of pro-environmental behavior: A literature review and guide for the empirical economist. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.3473702>
- Bohlen, L. C., Emerson, J. A., Rhodes, R. E., & Williams, D. M. (2022). A systematic review and meta-analysis of the outcome expectancy construct in physical activity research. *Annals of Behavioral Medicine, 56*(7), 658–672. <https://doi.org/10.1093/abm/kaab083>
- Burgstaller, L., & Florack, A. (2025). Sacrificing for the environment: The role of nonzero-sum beliefs. *Journal of Environmental Psychology, 103*, 102577. <https://doi.org/10.1016/j.jenvp.2025.102577>
- Cancian, M. F., & Park, C. H. (2025, March 4). *Is Ukraine now doomed?* Center for Strategic and International Studies. <https://www.csis.org/analysis/ukraine-now-doomed>

- Capstick, S. (2013). Public understanding of climate change as a social dilemma. *Sustainability*, 5(8), 3484–3501. <https://doi.org/10.3390/su5083484>
- Chiu, C., Hong, Y., & Dweck, C. S. (1997). Lay dispositionism and implicit theories of personality. *Journal of Personality and Social Psychology*, 73(1), 19–30. <https://doi.org/10.1037/0022-3514.73.1.19>
- Cho, R. (2020, December 18). *How buying stuff drives climate change*. State of the Planet. <https://news.climate.columbia.edu/2020/12/16/buying-stuff-drives-climate-change/>
- Clayton, S. (2024). A social psychology of climate change: Progress and promise. *British Journal of Social Psychology*. <https://doi.org/10.1111/bjso.12749>
- Cohen, J. (2013). Statistical power analysis for the behavioral sciences. In *Routledge eBooks* (2nd ed.). <https://doi.org/10.4324/9780203771587>
- Collado, S., & Evans, G. W. (2019). Outcome expectancy: A key factor to understanding childhood exposure to nature and children’s pro-environmental behavior. *Journal of Environmental Psychology*, 61, 30–36. <https://doi.org/10.1016/j.jenvp.2018.12.001>
- Cook, J., Nuccitelli, D., Green, S. A., Richardson, M., Winkler, B., Painting, R., Way, R., Jacobs, P., & Skuce, A. (2013). Quantifying the consensus on anthropogenic global warming in the scientific literature. *Environmental Research Letters*, 8(2), 024024. <https://doi.org/10.1088/1748-9326/8/2/024024>
- Crocker, J., & Canevello, A. (2018). From egosystem to ecosystem: Motivations of the self in a social world. In *Advances in Motivation Science* (pp. 41–86). <https://doi.org/10.1016/bs.adms.2018.01.003>
- Crocker, J., Canevello, A., & Lewis, K. A. (2017). Romantic relationships in the ecosystem: Compassionate goals, nonzero-sum beliefs, and change in relationship quality. *Journal of Personality and Social Psychology*, 112(1), 58–75. <https://doi.org/10.1037/pspi0000076>

- Crow, D., Staas, L., & Triunfo, N. (2023, July 10). *Behavioural changes*. International Energy Agency. <https://www.iea.org/reports/behavioural-changes>
- Davis, J. L., Le, B., & Coy, A. E. (2011). Building a model of commitment to the natural environment to predict ecological behavior and willingness to sacrifice. *Journal of Environmental Psychology*, 31(3), 257–265.
<https://doi.org/10.1016/j.jenvp.2011.01.004>
- Deshmukh, M. K. G., Sameeroddin, M., Abdul, D., & Sattar, M. A. (2021). Renewable energy in the 21st century: A review. *Materials Today Proceedings*, 80, 1756–1759.
<https://doi.org/10.1016/j.matpr.2021.05.501>
- Doran, R., & Hanss, D. (2022). Expectation of others' cooperation, efficacy beliefs, and willingness to sacrifice personal interests for the environment. *Scandinavian Journal of Psychology*, 63(4), 357–364. <https://doi.org/10.1111/sjop.12812>
- Farjam, M., Nikolaychuk, O., & Bravo, G. (2019). Experimental evidence of an environmental attitude-behavior gap in high-cost situations. *Ecological Economics*, 166, 106434. <https://doi.org/10.1016/j.ecolecon.2019.106434>
- Fearon, P. A., & Götz, F. M. (2024). The zero-sum mindset. *Journal of Personality and Social Psychology*, 127(4), 758–795. <https://doi.org/10.1037/pspa0000404>
- Fouad, N. A., & Guillen, A. (2005). Outcome expectations: Looking to the past and potential future. *Journal of Career Assessment*, 14(1), 130–142.
<https://doi.org/10.1177/1069072705281370>
- Franco, C., & Ghisetti, C. (2022). What shapes the “value-action” gap? The role of time perception reconsidered. *Economia Politica*, 39(3), 1023–1053.
<https://doi.org/10.1007/s40888-022-00282-8>

- Gifford, R., & Nilsson, A. (2014). Personal and social factors that influence pro-environmental concern and behaviour: A review. *International Journal of Psychology*, n/a. <https://doi.org/10.1002/ijop.12034>
- Gregersen, T., Doran, R., Böhm, G., & Poortinga, W. (2021). Outcome expectancies moderate the association between worry about climate change and personal energy-saving behaviors. *PLoS ONE*, 16(5), e0252105. <https://doi.org/10.1371/journal.pone.0252105>
- Hagger, M. S. (2025). Psychological determinants of health behavior. *Annual Review of Psychology*, 76, 821–850. <https://doi.org/10.1146/annurev-psych-020124-114222>
- Hayes, A. F. (2022). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach* (3rd ed.). Guilford Publications.
- International Energy Agency. (2022, March 1). *A 10-point plan to cut oil use*. <https://www.iea.org/reports/a-10-point-plan-to-cut-oil-use>
- Ivanova, D., Barrett, J., Wiedenhofer, D., Macura, B., Callaghan, M., & Creutzig, F. (2020). Quantifying the potential for climate change mitigation of consumption options. *Environmental Research Letters*, 15(9), 093001. <https://doi.org/10.1088/1748-9326/ab8589>
- Ivanova, D., Stadler, K., Steen-Olsen, K., Wood, R., Vita, G., Tukker, A., & Hertwich, E. G. (2015). Environmental impact assessment of household consumption. *Journal of Industrial Ecology*, 20(3), 526–536. <https://doi.org/10.1111/jiec.12371>
- Kaufmann, A., Malloy, E. J., & Haaga, D. A. (2020). Examining outcome expectancies for smoking vs. abstinence among adult daily smokers. *Addictive Behaviors*, 102, 106140. <https://doi.org/10.1016/j.addbeh.2019.106140>
- Lee, H., & Romero, J. (Eds.). (2023). *Climate Change 2023: Synthesis Report. Contribution of working Groups I, II and III to the Sixth Assessment Report of the*

- Intergovernmental Panel on Climate Change*. <https://doi.org/10.59327/ipcc/ar6-9789291691647>
- Levy, S. R., Chiu, C., & Hong, Y. (2006). Lay theories and intergroup relations. *Group Processes & Intergroup Relations*, 9(1), 5–24.
<https://doi.org/10.1177/1368430206059855>
- Li, D., Zhao, L., Ma, S., Shao, S., & Zhang, L. (2019). What influences an individual's pro-environmental behavior? A literature review. *Resources Conservation and Recycling*, 146, 28–34. <https://doi.org/10.1016/j.resconrec.2019.03.024>
- Lippke, S. (2020). Outcome expectation. In V. Zeigler-Hill & T. K. Shackelford (Eds.), *Encyclopedia of Personality and Individual Differences* (pp. 3379–3381).
https://doi.org/10.1007/978-3-319-24612-3_1145
- Lübke, C. (2021). The climate change dilemma: How cooperation beliefs influence energy conservation behavior. *Sustainability*, 13(10), 5575.
<https://doi.org/10.3390/su13105575>
- Lynas, M., Houlton, B. Z., & Perry, S. (2021). Greater than 99% consensus on human caused climate change in the peer-reviewed scientific literature. *Environmental Research Letters*, 16(11), 114005. <https://doi.org/10.1088/1748-9326/ac2966>
- MacKinnon, D. P., Fairchild, A. J., & Fritz, M. S. (2007). Mediation analysis. *Annual Review of Psychology*, 58(1), 593–614.
<https://doi.org/10.1146/annurev.psych.58.110405.085542>
- Marín-Beltrán, I., Demaria, F., Ofelio, C., Serra, L. M., Turiel, A., Ripple, W. J., Mukul, S. A., & Costa, M. C. (2021). Scientists' warning against the society of waste. *The Science of the Total Environment*, 811, 151359.
<https://doi.org/10.1016/j.scitotenv.2021.151359>

Meegan, D. V. (2010). Zero-sum bias: Perceived competition despite unlimited resources.

Frontiers in Psychology, 1. <https://doi.org/10.3389/fpsyg.2010.00191>

Molden, D. C., & Dweck, C. S. (2006). Finding “meaning” in psychology: A lay theories approach to self-regulation, social perception, and social development. *American Psychologist*, 61(3), 192–203. <https://doi.org/10.1037/0003-066x.61.3.192>

Münzer-Greier, M., & Poyer, J. (2022, October 8). Teuerungskrise: Energie sparen neuer Volkssport. *Kronen Zeitung*. <https://www.krone.at/2826911>

Myers, K. F., Doran, P. T., Cook, J., Kotcher, J. E., & Myers, T. A. (2021). Consensus revisited: Quantifying scientific agreement on climate change and climate expertise among earth scientists 10 years later. *Environmental Research Letters*, 16(10), 104030. <https://doi.org/10.1088/1748-9326/ac2774>

National Geographic Society. (2023, October 19). *Nonrenewable resources*.

<https://education.nationalgeographic.org/resource/nonrenewable-resources>

OpenAI. (2024). *ChatGPT*. (4-Turbo Version) [Large Language Model].

<https://chat.openai.com/chat>

Piao, X., & Managi, S. (2024). Determinants of pro-environmental behaviour: Effects of socioeconomic, subjective, and psychological well-being factors from 37 countries.

Humanities and Social Sciences Communications, 11(1).

<https://doi.org/10.1057/s41599-024-03790-z>

Plaks, J. E., Levy, S. R., & Dweck, C. S. (2009). Lay theories of personality: Cornerstones of meaning in social cognition. *Social and Personality Psychology Compass*, 3(6),

1069–1081. <https://doi.org/10.1111/j.1751-9004.2009.00222.x>

Powell, J. (2017). Scientists reach 100% consensus on anthropogenic global warming.

Bulletin of Science Technology & Society, 37(4), 183–184.

<https://doi.org/10.1177/0270467619886266>

- Reesor, L., Vaughan, E. M., Hernandez, D. C., & Johnston, C. A. (2017). Addressing outcomes expectancies in behavior change. *American Journal of Lifestyle Medicine*, 11(6), 430–432. <https://doi.org/10.1177/15559827617722504>
- Reich, R. R., Below, M. C., & Goldman, M. S. (2010). Explicit and implicit measures of expectancy and related alcohol cognitions: A meta-analytic comparison. *Psychology of Addictive Behaviors*, 24(1), 13–25. <https://doi.org/10.1037/a0016556>
- Ripple, W. J., Wolf, C., Newsome, T. M., Barnard, P., & Moomaw, W. R. (2019). World scientists' warning of a climate emergency. *BioScience*, 70(1), 8–12. <https://doi.org/10.1093/biosci/biz088>
- Schoemann, A. M., Boulton, A. J., & Short, S. D. (2017). Determining power and sample size for simple and complex mediation models. *Social Psychological and Personality Science*, 8(4), 379–386. <https://doi.org/10.1177/1948550617715068>
- Steffen, W., Richardson, K., Rockström, J., Cornell, S. E., Fetzer, I., Bennett, E. M., Biggs, R., Carpenter, S. R., De Vries, W., De Wit, C. A., Folke, C., Gerten, D., Heinke, J., Mace, G. M., Persson, L. M., Ramanathan, V., Reyers, B., & Sörlin, S. (2015). Planetary boundaries: Guiding human development on a changing planet. *Science*, 347(6223). <https://doi.org/10.1126/science.1259855>
- Steg, L., & Vlek, C. (2009). Encouraging pro-environmental behaviour: An integrative review and research agenda. *Journal of Environmental Psychology*, 29(3), 309–317. <https://doi.org/10.1016/j.jenvp.2008.10.004>
- Sukumaran, L., & Majhi, R. (2024). Not all who proclaim to be green are really green: Analysis of intention behavior gap through a systematic review of literature. *Management Review Quarterly*. <https://doi.org/10.1007/s11301-024-00415-2>

- Sun, M., Cao, X., Liu, X., Cao, T., & Zhu, Q. (2024). The Russia-Ukraine conflict, soaring international energy prices, and implications for global economic policies. *Heliyon*, 10(16), e34712. <https://doi.org/10.1016/j.heliyon.2024.e34712>
- Syed, S., Acquaye, A., Khalfan, M. M., Obuobisa-Darko, T., & Yamoah, F. A. (2024). Decoding sustainable consumption behavior: A systematic review of theories and models and provision of a guidance framework. *Resources Conservation & Recycling Advances*, 23, 200232. <https://doi.org/10.1016/j.rcradv.2024.200232>
- Thaller, A., Fleiß, E., & Brudermann, T. (2020). No glory without sacrifice — drivers of climate (in)action in the general population. *Environmental Science & Policy*, 114, 7–13. <https://doi.org/10.1016/j.envsci.2020.07.014>
- Thompson-Hollands, J., Bentley, K. H., Gallagher, M. W., Boswell, J. F., & Barlow, D. H. (2014). Credibility and outcome expectancy in the Unified Protocol: Relationship to outcomes. *Journal of Experimental Psychopathology*, 5(1), 72–82. <https://doi.org/10.5127/jep.033712>
- United Nations Environment Programme. (2022, October 27). *Emissions Gap Report 2022*. <https://www.unep.org/resources/emissions-gap-report-2022>
- United Nations Environment Programme. (2024a, February 1). *Global Resources Outlook 2024 - Bend the trend: Pathways to a liveable planet as resource use spikes*. <https://wedocs.unep.org/20.500.11822/44901>
- United Nations Environment Programme. (2024b, November 1). *Adaptation Gap Report 2024: Come hell and high water - As fires and floods hit the poor hardest, it is time for the world to step up adaptation actions*. <https://wedocs.unep.org/handle/20.500.11822/46497>

- Van Lange, P. A. M., Joireman, J., Parks, C. D., & Van Dijk, E. (2013). The psychology of social dilemmas: A review. *Organizational Behavior and Human Decision Processes*, 120(2), 125–141. <https://doi.org/10.1016/j.obhdp.2012.11.003>
- Vieira, J., Castro, S. L., & Souza, A. S. (2023). Psychological barriers moderate the attitude-behavior gap for climate change. *PLoS ONE*, 18(7), e0287404. <https://doi.org/10.1371/journal.pone.0287404>
- VioREL, N., Valentina, C., & Serenella, S. (2017). *Consumer's behaviour in assessing environmental impact of consumption: State of the art and challenges for modelling consumer's behaviour in life cycle-based indicators* (EUR 28886 EN). Publications Office of the European Union. <https://doi.org/10.2760/87401>
- Whitmarsh, L., Capstick, S., & Nash, N. (2017). Who is reducing their material consumption and why? A cross-cultural analysis of dematerialization behaviours. *Philosophical Transactions of the Royal Society A*, 375(2095), 20160376. <https://doi.org/10.1098/rsta.2016.0376>
- Wiedmann, T., Lenzen, M., Keyßer, L. T., & Steinberger, J. K. (2020). Scientists' warning on affluence. *Nature Communications*, 11(1). <https://doi.org/10.1038/s41467-020-16941-y>
- Williams, D. M., Anderson, E. S., & Winett, R. A. (2005). A review of the outcome expectancy construct in physical activity research. *Annals of Behavioral Medicine*, 29(1), 70–79. https://doi.org/10.1207/s15324796abm2901_10

Appendix A

Online Survey Screenshots

Liebe Teilnehmerin,
Lieber Teilnehmer,

herzlich willkommen zu dieser Studie des Instituts für Arbeits-, Wirtschafts-, und Sozialpsychologie der Universität Wien. Die Studie wird im Rahmen meiner Masterarbeit durchgeführt und untersucht einen möglichen Zusammenhang zwischen bestimmten persönlichen Überzeugungen und der individuellen Bereitschaft zum Konsumverzicht. Die Erkenntnisse, die mit dieser Studie gewonnen werden, sollen zum wissenschaftlichen Feld der Sozialpsychologie beitragen. Ich bedanke mich für Ihre Bereitschaft, daran teilzunehmen!

Die Teilnahme an der Studie besteht in der Beantwortung einer Reihe von Fragen. Wenn Sie sich bei einer Frage nicht ganz sicher sind, kreuzen Sie einfach das Feld an, das am ehesten zutrifft. Es geht um Ihre persönliche Einschätzung, es gibt keine richtigen oder falschen Antworten.

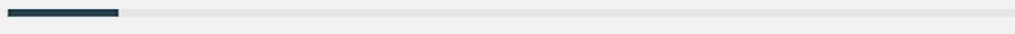
Die Beantwortung der Fragen dauert circa 5-10 Minuten.

Um an der Studie teilnehmen zu können, müssen Sie mindestens 18 Jahre alt sein. Ihre Teilnahme an dieser Studie ist freiwillig und Sie können die Beantwortung des Fragebogens jederzeit ohne Angabe von Gründen abbrechen. Die Daten werden anonym erfasst und lediglich für wissenschaftliche Zwecke ausgewertet. Keine der von Ihnen angegebenen Informationen kann auf Ihre Person zurückgeführt werden.

Falls Sie Fragen zu der Studie haben, kontaktieren Sie mich bitte unter a0648269@univie.ac.at.

Vielen Dank für Ihre Teilnahme!
Rumyana Gessendorfer

Wenn Sie mit den Teilnahmebedingungen einverstanden sind und mindestens 18 Jahre alt sind, klicken Sie auf das Pfeilsymbol/"Weiter" und beginnen Sie mit der Beantwortung des Fragebogens.

 11% WEITER

Im Folgenden werden Ihnen einige Fragen zu Ihrer Person gestellt.

Welche Staatsangehörigkeit haben Sie?

- ☐ Deutschland
- ☐ Österreich
- ☐ Schweiz
- ☐ anderer EU-Staat
- ☐ anderer Nicht-EU-Staat

Welchen höchsten allgemeinbildenden Schulabschluss haben Sie?

- ☐ Kein Pflichtschulabschluss
- ☐ Ich habe einen Abschluss einer Pflichtschule (z.B. Hauptschule oder entsprechende Stufe einer anderen Schulform)
- ☐ Ich habe einen Lehrschulabschluss (Berufsschule)
- ☐ Ich habe einen Abschluss einer Fachschule oder berufsbildenden Schule
- ☐ Ich habe einen Abiturentenlehrgang / Kolleg absolviert
- ☐ Ich habe die allgemeine oder fachgebundene Hochschulreife / Abitur / Matura oder die Fachhochschulreife
- ☐ Ich habe einen Universitäts- oder Fachhochschulabschluss (Bachelor, Master, Diplom, Magister, Lizentiat, Staatsexamen, Promotion, Habilitation oder andere)
- ☐ Ich habe einen anderen Schulabschluss und zwar:

Bitte geben Sie an, zu welchem Geschlecht Sie sich zugehörig fühlen.

- ☐ Männlich
- ☐ Weiblich
- ☐ Divers

Geben Sie Ihr Alter in Jahren an.



22%

WEITER

Unten sehen Sie eine Leiter mit Nummern neben jeder Sprosse. Stellen Sie sich vor, diese Leiter zeigt an, wo **Menschen in Österreich – bzw. in Deutschland, falls Sie in Deutschland leben –** stehen. An der Spitze der Leiter sind Menschen, die am besten gestellt sind – die am meisten Geld besitzen, die höchste Bildung und die angesehensten Berufe haben. Am unteren Ende der Leiter sind Menschen, die am schlechtesten gestellt sind – die am wenigsten Geld besitzen, über die geringste Bildung verfügen und die am wenigsten angesehen sind oder keine Berufe haben.

Je höher Sie auf der Leiter stehen, desto ähnlicher sind Sie den Menschen am oberen Ende der Leiter. Je niedriger Sie auf der Leiter stehen, desto ähnlicher sind Sie den Menschen am unteren Ende. Bitte geben Sie an, auf welcher Leitersprosse Sie zum gegenwärtigen Zeitpunkt im Vergleich zu anderen **Menschen in Österreich bzw. in Deutschland** stehen.



Wo würden Sie sich auf der Leiter platzieren? Bitte wählen Sie die Nummer aus der Drop-Down-Liste unten aus.

Bitte wählen

▼

33%

WEITER

Wie fühlen Sie sich in Ihrer derzeitigen finanziellen Lage?

Überwältigt	Sehr besorgt	Eher besorgt	Neutral	Beruhigt	Sehr beruhigt	Völlig gelassen
☐	☐	☐	☐	☐	☐	☐

44%

WEITER

Bitte geben Sie an, wie sehr Sie den folgenden Aussagen zustimmen.

Wenn schwierige Situationen zwischen zwei Gruppen entstehen, ist es normalerweise möglich, eine gute Lösung für beide Gruppen zu finden.

- ☐ Stimme überhaupt nicht zu
- ☐ Stimme nicht zu
- ☐ Stimme eher nicht zu
- ☐ Neutral
- ☐ Stimme eher zu
- ☐ Stimme zu
- ☐ Stimme sehr zu

Das Ergebnis von Gruppenkonflikten kann in den meisten Fällen für alle beteiligten Gruppen ein Gewinn sein.

- ☐ Stimme überhaupt nicht zu
- ☐ Stimme nicht zu
- ☐ Stimme eher nicht zu
- ☐ Neutral
- ☐ Stimme eher zu
- ☐ Stimme zu
- ☐ Stimme sehr zu

Wenn es zu Meinungsverschiedenheiten kommt, kann das Ergebnis für alle Beteiligten zufriedenstellend sein.

- ☐ Stimme überhaupt nicht zu
- ☐ Stimme nicht zu
- ☐ Stimme eher nicht zu
- ☐ Neutral
- ☐ Stimme eher zu
- ☐ Stimme zu
- ☐ Stimme sehr zu

Wenn ein Konflikt entsteht, ist es möglich, eine gute Lösung für alle Beteiligten zu finden.

- ☐ Stimme überhaupt nicht zu
- ☐ Stimme nicht zu
- ☐ Stimme eher nicht zu
- ☐ Neutral
- ☐ Stimme eher zu
- ☐ Stimme zu
- ☐ Stimme sehr zu

Normalerweise ist es möglich, Meinungsverschiedenheiten auf gegenseitig nutzbringende Weise zu lösen.

- ☐ Stimme überhaupt nicht zu
- ☐ Stimme nicht zu
- ☐ Stimme eher nicht zu
- ☐ Neutral
- ☐ Stimme eher zu
- ☐ Stimme zu
- ☐ Stimme sehr zu

In schwierigen Situationen ist es meist möglich, Lösungen zu finden, bei denen am Ende alle etwas davon haben.

- ☐ Stimme überhaupt nicht zu
- ☐ Stimme nicht zu
- ☐ Stimme eher nicht zu
- ☐ Neutral
- ☐ Stimme eher zu
- ☐ Stimme zu
- ☐ Stimme sehr zu

Bei Konflikten muss es in den meisten Fällen nicht Gewinner und Verlierer geben.

- ☐ Stimme überhaupt nicht zu
- ☐ Stimme nicht zu
- ☐ Stimme eher nicht zu
- ☐ Neutral
- ☐ Stimme eher zu
- ☐ Stimme zu
- ☐ Stimme sehr zu

Wenn Menschen Vereinbarungen bei Konflikten treffen, dann sind meist Vereinbarungen möglich, die für alle gleichermaßen von Vorteil sind.

- ☐ Stimme überhaupt nicht zu
- ☐ Stimme nicht zu
- ☐ Stimme eher nicht zu
- ☐ Neutral
- ☐ Stimme eher zu
- ☐ Stimme zu
- ☐ Stimme sehr zu

56%

WEITER

Bitte geben Sie an, wie sehr Sie den folgenden Aussagen zustimmen.

Die Rechte von Minderheiten zu verbessern, ist gut für die Gesellschaft als Ganzes.

- ☐ Stimme überhaupt nicht zu
- ☐ Stimme nicht zu
- ☐ Stimme eher nicht zu
- ☐ Neutral
- ☐ Stimme eher zu
- ☐ Stimme zu
- ☐ Stimme sehr zu

Die Bildung von benachteiligten Menschen zu verbessern, nutzt der Gesellschaft als Ganzes.

- ☐ Stimme überhaupt nicht zu
- ☐ Stimme nicht zu
- ☐ Stimme eher nicht zu
- ☐ Neutral
- ☐ Stimme eher zu
- ☐ Stimme zu
- ☐ Stimme sehr zu

Wenn Gruppen mit niedrigerem Status finanzielle Zugewinne machen, gewinnen Gruppen mit höherem Status meist auch.

- ☐ Stimme überhaupt nicht zu
- ☐ Stimme nicht zu
- ☐ Stimme eher nicht zu
- ☐ Neutral
- ☐ Stimme eher zu
- ☐ Stimme zu
- ☐ Stimme sehr zu

Die Situation von benachteiligten Gruppen zu verbessern, ist für die gesamte Gesellschaft von Vorteil.

- ☐ Stimme überhaupt nicht zu
- ☐ Stimme nicht zu
- ☐ Stimme eher nicht zu
- ☐ Neutral
- ☐ Stimme eher zu
- ☐ Stimme zu
- ☐ Stimme sehr zu

Wenn die finanzielle Lage von benachteiligten Menschen verbessert wird, verbessert das die Gesellschaft als Ganzes.

- ☐ Stimme überhaupt nicht zu
- ☐ Stimme nicht zu
- ☐ Stimme eher nicht zu
- ☐ Neutral
- ☐ Stimme eher zu
- ☐ Stimme zu
- ☐ Stimme sehr zu

Wenn benachteiligte Gruppen mehr Rechte bekommen, geht das nicht auf Kosten von besser gestellten Gruppen.

- ☐ Stimme überhaupt nicht zu
- ☐ Stimme nicht zu
- ☐ Stimme eher nicht zu
- ☐ Neutral
- ☐ Stimme eher zu
- ☐ Stimme zu
- ☐ Stimme sehr zu

Rechte für benachteiligte Gruppen nutzen auch besser gestellten Gruppen.

- ☐ Stimme überhaupt nicht zu
- ☐ Stimme nicht zu
- ☐ Stimme eher nicht zu
- ☐ Neutral
- ☐ Stimme eher zu
- ☐ Stimme zu
- ☐ Stimme sehr zu

Schwache zu unterstützen bedeutet nicht, dass es Starken schlechter geht.

- ☐ Stimme überhaupt nicht zu
- ☐ Stimme nicht zu
- ☐ Stimme eher nicht zu
- ☐ Neutral
- ☐ Stimme eher zu
- ☐ Stimme zu
- ☐ Stimme sehr zu

67%

WEITER

Bitte geben Sie an, wie sehr Sie den folgenden Aussagen zustimmen.

Ich bin bereit, einen genügsameren Lebensstil zu führen und meine Gewohnheiten entsprechend zu ändern, um negative Auswirkungen meines Verhaltens auf die Umwelt zu reduzieren.

- ☐ Stimme überhaupt nicht zu
- ☐ Stimme nicht zu
- ☐ Stimme eher nicht zu
- ☐ Neutral
- ☐ Stimme eher zu
- ☐ Stimme zu
- ☐ Stimme sehr zu

Ich bin bereit, Aktivitäten zu unterlassen, die der Umwelt schaden können, auch wenn es sich dabei um kulturell oder gesellschaftlich anerkannte Praktiken handelt.

- ☐ Stimme überhaupt nicht zu
- ☐ Stimme nicht zu
- ☐ Stimme eher nicht zu
- ☐ Neutral
- ☐ Stimme eher zu
- ☐ Stimme zu
- ☐ Stimme sehr zu

Ich bin bereit, Dinge aufzugeben, die ich gerne mache, wenn sie der Umwelt schaden.

- ☐ Stimme überhaupt nicht zu
- ☐ Stimme nicht zu
- ☐ Stimme eher nicht zu
- ☐ Neutral
- ☐ Stimme eher zu
- ☐ Stimme zu
- ☐ Stimme sehr zu

Der Umwelt zuliebe bin ich bereit, meinen täglichen Konsum zu reduzieren, auch wenn ich keinen Dank für meinen Verzicht erhalte.

- ☐ Stimme überhaupt nicht zu
- ☐ Stimme nicht zu
- ☐ Stimme eher nicht zu
- ☐ Neutral
- ☐ Stimme eher zu
- ☐ Stimme zu
- ☐ Stimme sehr zu

78%

WEITER

Bitte geben Sie an, wie sehr Sie den folgenden Aussagen zustimmen.

Wenn ich aufhöre, Dinge zu kaufen, die ich nicht brauche, wird das einen großen Unterschied für die Umwelt machen.

- ☐ Stimme überhaupt nicht zu
- ☐ Stimme nicht zu
- ☐ Stimme eher nicht zu
- ☐ Neutral
- ☐ Stimme eher zu
- ☐ Stimme zu
- ☐ Stimme sehr zu

Wenn ich als Verbraucher*in meinen Konsum aktiv reduziere, leiste ich einen wesentlichen Beitrag im Kampf gegen den Klimawandel.

- ☐ Stimme überhaupt nicht zu
- ☐ Stimme nicht zu
- ☐ Stimme eher nicht zu
- ☐ Neutral
- ☐ Stimme eher zu
- ☐ Stimme zu
- ☐ Stimme sehr zu

Wenn ich als Verbraucher*in einen genügsameren und einfacheren Lebensstil führe, wird dies eine entscheidende Rolle bei der Eindämmung des Klimawandels spielen.

- ☐ Stimme überhaupt nicht zu
- ☐ Stimme nicht zu
- ☐ Stimme eher nicht zu
- ☐ Neutral
- ☐ Stimme eher zu
- ☐ Stimme zu
- ☐ Stimme sehr zu

 89%

WEITER

Herzlichen Dank, dass Sie an der Studie teilgenommen haben!

Ziel der Studie ist es, einen Zusammenhang zwischen Nicht-Nullsummenüberzeugungen, persönlichen Ergebniserwartungen und der Bereitschaft zu Konsumverzicht der Umwelt zuliebe zu erforschen.

Menschen mit ausgeprägter Nicht-Nullsummenüberzeugung nehmen an, dass soziale Interaktionen zwischen Individuen oder Gruppen in Win-Win Ergebnissen resultieren können. Wenn widersprüchliche Interessen auftreten, ist es aus ihrer Sicht möglich, Lösungen zu finden, von denen alle Beteiligten profitieren. Es soll untersucht werden, ob Nicht-Nullsummenüberzeugungen mit einer höheren Bereitschaft zum Verzicht der Umwelt zuliebe zusammenhängen, und wie diese Überzeugungen mit der Erwartung, ein positives Ergebnis zu erzielen, einhergeht.

Sollten Sie noch weitere Fragen haben, schreiben Sie mir gerne eine Mail an a0648269@univie.ac.at.

Vielen Dank noch einmal!
Sie können nun diese Seite schließen.

100%

Appendix B

Zusammenfassung

Die vorliegende Studie leistet einen Beitrag zur Erforschung nachhaltigen Konsumverhaltens, indem sie das Konstrukt der Nicht-Nullsummen-Überzeugungen (Crocker et al., 2017) in Bezug auf die individuelle Bereitschaft zur Konsumreduzierung aus Umweltgründen untersucht. Nicht-Nullsummen-Überzeugungen beziehen sich auf eine kooperative Denkweise, die im Gegensatz zu einer kompetitiven Nullsummen-Perspektive steht. In der Studie wurde angenommen, dass Nicht-Nullsummen-Überzeugungen eine höhere Bereitschaft zur Konsumreduzierung vorhersagen. Darüber hinaus wurde untersucht, ob positive Ergebniserwartungen (Bandura, 1986) die Beziehung zwischen Nicht-Nullsummen-Überzeugungen und der Bereitschaft zur Konsumreduzierung vermitteln. Die Ergebnisse der Studie zeigten, dass sowohl individuelle als auch soziale Nicht-Nullsummen-Überzeugungen eine Konsumreduzierung signifikant vorhersagen. Insbesondere erwies sich die positive Ergebniserwartung als besonders robuster Prädiktor, der die Beziehung zwischen Nicht-Nullsummen-Überzeugungen und der Bereitschaft zur Konsumreduzierung vermittelt. Diese Ergebnisse deuten darauf hin, dass umweltfreundlichen Einstellungen Nicht-Nullsummen-Denkweisen zugrunde liegen, wobei individuelle positive Erwartungen hinsichtlich der Folgen einer Konsumreduzierung eine entscheidende Rolle bei der Umwandlung dieser Einstellungen in nachhaltiges Verhalten spielen. Die Ergebnisse haben wichtige Auswirkungen sowohl auf die zukünftige Forschung als auch auf die Entwicklung eines neuen Ansatzes für dringliche Umweltprobleme.

Keywords: Nicht-Nullsummen-Überzeugungen, Konsum, Konsumverhalten, Ergebniserwartungen, Umwelt, Überkonsum, Nachhaltigkeit, Kooperation

Appendix C

Declaration

I acknowledge the use of ChatGPT [<https://chat.openai.com/>] to help generate ideas for item scales and for the analysis and interpretation of the SPSS and PROCESS statistical outputs as well as for elaborating on the discussion, the limitations, the implications for future research and my supervisor's feedback on the first draft of this thesis.

I used and reviewed the feedback generated by ChatGPT as a starting point for developing adjustments to existing item scales and for considering various aspects of the results of my study before rephrasing and adapting them. I also revised and edited all the proposed content using my own corrections, thoughts and expressions.