Nature Experiences and Pro-Environmental Behavior: Evidence from a Randomized Controlled Trial

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Exposure to nature is positively associated with pro-environmental behavior, though causal evidence to date is limited. We conducted a randomized controlled trial with $N = 542$ participants, to explore whether a one-time encounter with nature can lead individuals to behave more pro-environmentally. Participants were randomly assigned to one of four conditions, spending 15 minutes either walking through a park, walking through an urban area, viewing a video of a nature walk, or taking a break while seated at a desk. Participants received a EUR 10 endowment to either keep for themselves or donate to a conservation, social, or cultural charity. We observed pro-environmental behavior by measuring donations to the conservation charity, which came at a direct cost to participants. We found modest support that real exposure to nature positively affects pro-environmental behavior, as evidenced by higher average donations compared to watching a nature video, but not compared to any other condition. Self-reported restoration mediated the effect, but lost significance when controlling for environmental concern. Thus, attention restoration as a mechanism was driven by environmentally concerned individuals. Fostering more nature experiences may present a relevant avenue for behavior-change. We discuss limitations and propose several directions for future research.

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1. Introduction

Biodiversity loss has accelerated, with a 69% decline in monitored wildlife populations observed since 1970 (WWF, 2022) and 10,739 species currently threatened (IUCN, 2022, February). Efforts to prevent further biodiversity loss are of paramount importance, if we are to avoid large-scale ecosystem collapse (Kemp et al., 2022). Individual behavior is crucial for conservation, as changes in human behavior can reverse environmental degradation (Nielsen et al., 2021). Frequent contact with nature might lead to a personal commitment to biodiversity conservation (Prévot et al., 2018) and foster pro-environmental behavior (Whitburn et al., 2019; Alcock et al., 2020; Martin et al., 2020), but increasing urbanization is not only contributing to this biodiversity crisis, it is also limiting people's access to nature experiences (Dan-Rakedzon et al., 2024). The majority of U.S. adults spend 5 or fewer hours outside in nature per week (Case et al., 2017), while Europeans spend 8.5 hours per week in summer months (Diffey, 2011). Evidence suggests that a loss of interaction with nature discourages positive emotions, attitudes, and behaviors towards the environment (see, e.g., a review by Soga and Gaston, 2016). Fostering nature contact may be critical to promote pro-environmental behavior and, subsequently, conservation efforts (Jucker et al., 2018).

In this work, we experimentally test whether exposure to nature increases pro-environmental behavior (PEB). We conduct an incentivized Randomized Controlled Trial (RCT) and measure observable PEB through donations to a nature conservation organization, rather than relying on self-reported measures. Our design necessitates a trade-off between selfish and environmental behavior, capturing the personal cost of behaving pro-environmentally. We explore a potential mechanism driving the effect of nature on PEB by testing for attention restoration as a mediator. Finally, we explore the potential of a nature video for providing restoration and promoting PEB, as a possible low-cost intervention for urban areas lacking natural spaces. A causal effect of nature on PEB could motivate urban planners to prioritize development of more parks and natural environments in urban areas, and promote policymakers to create more opportunities for nature visitation and immersion programs (J. Joy James and Battista, 2019).

1.1. Nature Experiences and Pro-Environmental Behavior

There is substantial evidence for an association between experiences in nature and PEB. Alcock et al. (2020) and Martin et al. (2020) found a positive relationship between recreational nature visits and self-reported PEB, based on representative surveys of the English adult population. Similarly, data from a survey of U.S. adults revealed a significant positive association between participation in outdoor recreational activities and greater environmental concern and engagement in PEB (Teisl and O'Brien, 2003). A survey of urban-resident U.S. adults found a positive association between self-reported participation in "wild nature", like hiking, camping, or fishing before the age of 11 and self-reported engagement in pro-environmental behaviors as an adult (Wells and Lekies, 2006). Evidence from a 12-year longitudinal study investigating childhood origins of young adult environmental behavior

also showed that childhood time spent outdoors significantly predicted greater PEB at age 18 (Evans et al., 2018). A study of urban New Zealand residents revealed that exposure to nature, measured by the level of neighborhood greenery, was positively associated with PEB (Whitburn et al., 2019).

Though these studies make important contributions to understanding the complex relationship between human behavior and the natural world, none of the discussed studies have manipulated exposure to nature in order to investigate possible causality of nature experiences on PEB. Several studies have experimentally investigated the role of nature visitation on other psychological outcomes, such as affect (Mayer et al., 2009; Nisbet and Zelenski, 2011), attention restoration (Berman et al., 2008), concentration (Taylor and Kuo, 2009) and relaxation (Nisbet and Zelenski, 2011), to name a few. Some studies have also explored the causality of indirect nature exposure through videos on PEB. These studies used experimental manipulations of virtual nature exposure in a lab setting, but findings are mixed.

One study reported that students who were assigned to view a nature documentary donated more to environmental charities than those who viewed a documentary about physics, supporting the notion that nature experiences can affect PEB (Arendt and Matthes, 2016). However, this was the case only among individuals who exhibited greater levels of nature connectedness (also referred to as nature relatedness). Zelenski et al. (2015) found that students who viewed a nature video exhibited more cooperative behavior in the context of a fishing-themed commons dilemma, than those who viewed a video about architecture. Cooperation entailed more sustainable fishing practices in a scenario where participants received incentives for each fish harvested. Unlike in the work by Arendt and Matthes (2016), nature relatedness did not moderate the relationship between nature exposure and PEB. In contrast to both of these, a further study investigating virtual nature exposure with different levels of immersiveness, did not find any significant effects on PEB (Soliman et al., 2017). Specifically, participants who viewed a nature video either on a desktop computer or a head-mounted display did not exhibit significantly greater PEB than those who viewed a video of the built environment.

In light of the current research, to the best of our knowledge, the question, whether direct exposure to nature leads to greater observed PEB, remains unanswered—and, thus, is at the center of our study.

1.2. Mechanisms Underlying the Nature–PEB Relationship

The focus of the present study is to explore whether a one-time exposure to nature exerts a casual effect on PEB. To better understand such an effect, the study further examines a potential underlying mechanism.

The use of nature as a form of psychological restoration has been well-documented (see reviews by Ohly et al., 2016; Stevenson et al., 2018). Attention restoration theory posits that nature has restorative properties, which can renew depleted psychological resources (Kaplan, 1987). Several

studies have identified a connection between psychological restoration and PEB. Hartig et al. (2001) found that students who experienced greater restoration from a fresh-water marsh engaged in more PEB. German students who most strongly endorsed nature visitation as a means for their own psychological restoration, reported the highest levels of PEB (Byrka et al., 2010). Similarly, use of nature for restoration was identified as a significant predictor of PEB among Norwegian adults (Hartig et al., 2007). A study conducted with Spanish schoolchildren found that perceived restorativeness of schoolyards predicted their environmental attitudes, which in turn predicted their PEB (Collado and Corraliza, 2015). Whitburn et al. (2019) provided evidence that psychological restoration and environmental attitudes might mediate the effect of nature exposure on PEB. While results from Whitburn et al. (2019) cannot be interpreted as conclusive evidence of causality due to the non-randomized design, the findings indicate that restoration and environmental attitudes are relevant psychological constructs by which nature experiences could drive pro-environmental behavior.

There are several possible explanations for why the restorative properties of nature might provoke pro-environmental behavior. It may be that the positive experience of being in nature makes people want to engage in acts that protect the environment from which they derive this benefit (Berto, 2014). In this sense, nature provides a positive utility that motivates PEB. This has been considered a "self-interested" use of nature (Kaiser et al., 2013). It has also been suggested that restorative natural spaces are more conducive to place attachment (Korpela et al., 2001), and that this attachment increases protective behaviors towards the environment (Lawrence, 2012). There is also evidence that positive emotional states, as brought about through attention restoration, reduce the concern for the self and trigger a more collective mental frame, which leads to prosocial behavior more broadly (Zhang et al., 2014; Schwartz et al., 2019). From this perspective, pro-environmental behavior can be considered a type of prosocial behavior (Klein et al., 2022).

Although there is strong evidence that nature may affect pro-environmental behavior by providing psychological restoration, other mechanisms could also be at play. Indeed, numerous studies have identified an association between nature connectedness and pro-environmental behavior (see, e.g., meta-analyses by Mackay and Schmitt, 2019; Whitburn et al., 2020). Nature connectedness, though operationalized in different ways, using multiple scales, can be understood to be a person's subjective appraisal of their own relationship with nature. Nature experiences may, in turn, foster a stronger nature connectedness (Mayer and Frantz, 2004; Nisbet et al., 2009). Notably, as underscored by Mackay and Schmitt (2019), nature connection implies an incorporation of nature into one's self-definition. As such, it has been treated as a personality trait, as well as a psychological state, and is considered relatively stable.

While it is possible that repeated exposure to nature experiences could shape nature connectedness over time (Schultz and Tabanico, 2007), we do not consider it likely that a one-time experience in nature would be sufficient, and, therefore, do not explore it as a causal mechanism in this setting. However, we do treat environmental identity as a control variable, as we acknowledge the importance

of identity and feelings of "oneness" with nature in influencing individual pro-environmental behavior (Clayton, 2003; Clayton et al., 2021). Instead, we focus on psychological restoration as a pathway. Even indirect exposure to nature through photos for as little as six minutes has been shown to provoke restoration and improve attention (Berto, 2005), supporting restoration as a more plausible mechanism. We acknowledge that although there may be multiple channels through which the restorative qualities of nature influence environmental behavior, we treat restoration as a single mechanism and mediator in our analyses.

In line with Attention Restoration Theory and corroborated in various studies, certain elements of the natural environment have been found to be most restorative. The "fascination" component, defined as being effortlessly engaged (Kaplan, 1995), is a key factor in restorative experiences (Collado and Corraliza, 2015). Environments featuring greenery (Lohr and Pearson-Mims, 2006; Nordh et al., 2009; Hartig et al., 2014), water (Han, 2010; White et al., 2010), and sounds of birdsong (Alvarsson et al., 2010; Benfield et al., 2014; Medvedev et al., 2015) have been shown to be particularly restorative. We have incorporated these insights into the selection of the settings for the present study (see details in Section 2).

1.3. Measuring Observed Pro-Environmental Behavior

Observing pro-environmental behavior is inherently challenging, explaining the prevalence of self-report measures in the literature. In a meta-analysis investigating the degree of association between self-reported and objective measures of PEB, the authors found large heterogeneity in validity of self-reports across studies and, furthermore, that a large amount of variance between self-reports and objective measures remains unexplained (Kormos and Gifford, 2014). Relying solely on self-reported PEB, therefore, has its limitations. In field experiments, PEB has been observed via objective measures, such as home energy meter readings (Ayres et al., 2012) or water usage from a local water district (e.g. Schultz et al., 2016), but these typically involve longer-term observation periods or interventions with greater frequency (like monthly or quarterly feedback reports). Investigating the effect of a single nature experience on PEB necessitates observation of PEB immediately following the experience.

One approach, typical within the field of environmental economics, is the implementation of an environmentally-framed economic task allowing for observation of PEB under controlled conditions. Environmental behavior has frequently been framed as a social dilemma (Van Lange et al., 2013), with public goods games used to simulate decision-making around environmental issues involving collective action, such as climate change (e.g. Milinski et al., 2006, 2008; Brick and Visser, 2015) or over-fishing (e.g. Gifford and Wells, 1991; Gifford and Gifford, 2000). The sustainable or pro-environmental outcome of a commons dilemma (like avoiding catastrophic climate change) is also the cooperative outcome. In such public goods games, participants choose to behave either selfishly or cooperatively, with the latter additionally resulting in a pro-environmental outcome. Therefore, it is not always clear, whether participants are making a primarily pro-environmental, or cooperative choice (Lange and Dewitte, 2019). Disentangling the motives is important, because cooperation may involve different mechanisms and motivations than environmental behavior. For instance,

Klein et al. (2017) found that when cooperative and pro-environmental behavior were at odds with one another, subjects mostly chose cooperation over PEB, suggesting that cooperation is the main motivator in environmentally-framed public goods games. The group dynamics of social dilemmas also introduce reputation and social-image concerns (see e.g. Benabou and Tirole, 2006; Andreoni and Bernheim, 2009), something that may not necessarily be at play when engaging in individual environmental action. Thus, evidence from environmentally-framed public goods games may not be the most suitable paradigm for measuring individual PEB. As a methodological strength of the present study, we, therefore, employ an experimental framework that allows us to observe participant's pro-environmental behavior, but which does not rely on group effort or cooperation.

1.4. Hypotheses

In the present pre-registered study,[1] we investigate whether exposure to nature leads people to behave more pro-environmentally and, furthermore, whether this relationship can be explained through the mechanism of attention restoration. We manipulate the type of environment participants are exposed to for a 15-minute duration and measure their donation behavior to a conservation charity. We state the following pre-registered hypotheses:

Hypothesis 1

The portion of participants who donate to the nature conservation charity will differ between conditions; specifically, the portion of donors will be highest in the conditions exposed to nature, either directly via the nature walk (NATURE) or indirectly via the nature video (VIDEO).

Hypothesis 2

The average donation amount to the nature conservation charity will differ between conditions; specifically, average donations will be highest in the conditions exposed to nature, either directly via the nature walk (NATURE) or indirectly via the nature video (VIDEO).

Hypothesis 3

Attention restoration will mediate the effect of nature exposure (VIDEO and NATURE) on pro-environmental behavior.

2. Experimental Design and Methods

2.1. Participants and Setting

The study was ethically approved by the Internal Review Board of the University of Innsbruck and funded by the Austrian Science Fund (FWF), SFB F63. Participants of this study were students of the

[1] The pre-analysis plan, the experimental software, the data, the analyses files, as well as all other relevant documents can be found in the OSF project repository.

University of Innsbruck (N = 542), recruited from the university's EconLab database via hroot (Bock et al., 2014), a web-based software ensuring a randomized invitation process. The average age was 22.5 years and the sample comprised of 64% women. Participants were randomly assigned to either a nature walk (N = 138), a nature video (N = 133), an urban walk (N = 139), or a break (N = 132) condition, each lasting approximately 15 minutes:

- Participants in the **NATURE** condition were asked to take a walk in a park (court garden —"Hofgarten" —Innsbruck), featuring greenery, a mountain backdrop and a pond. See Figure 1a for a representative image of the park.
- Participants in the **URBAN** condition were asked to take a walk in central Innsbruck, towards the main train station, in an urban and trafficked area with limited greenery. See Figure 1b.
- Participants in the **VIDEO** condition were asked to remain in the lab and watch a point-of-view video with audio of a nature walk, featuring greenery, birdsong and a lake. See Figure 1c for a screenshot of the video and https://www.youtube.com/watch?v=U1j-eO3-aR8&t=660s for the video segment used.
- Participants in the **BREAK** condition were asked to remain in the lab and take a break from the previous tasks in silence (see Figure 1d for the lab environment).

See Figure 1 for representative images of the four treatment conditions. Participants were aware when signing up, that the study was incentivized. They received a show-up fee of EUR 2, in addition to a variable component, based on their decisions.[2] The study was conducted in the city of Innsbruck, Austria, over a 5-week period from October 3 to November 8 2022, between 9:00am and 3:00pm. Per experiment day, four lab sessions were conducted, each accommodating a maximum of 24 participants. Each condition was run once per experiment day to reduce weather or day-specific fixed effects. The weather over the period of the study was fair, with temperatures ranging from 10 to 22 degrees Celsius, and no precipitation recorded on any of the days the experiment was conducted. To limit distraction and avoid multiple sets of instructions, participants within each lab session were assigned to the same treatment condition. This also obscured participants' awareness of other conditions. Each day, the order of the sessions (conditions) was randomized and participants were randomly allocated to a seat in the lab. Participants were unable to discern any allocation pattern or any information about the conditions when signing up for the study. The study was administered in German.

2.2. Procedure

The study comprised of three parts, detailed below. Participants first completed a survey and task in the lab on the computer, before proceeding to their randomly assigned intervention. After the

[2] Participants retained the portion of the endowment of EUR 10 that they did not choose to donate to the charity selected for payoff. Further details provided in Section 2.2.3.

Figure 1: Visual representation of the treatment conditions

(a) NATURE: Hofgarten (last day of data collection)

(b) URBAN: View to central station on route

(c) VIDEO: Nature walk video (screenshot)

(d) BREAK: University of Innsbruck's EconLab

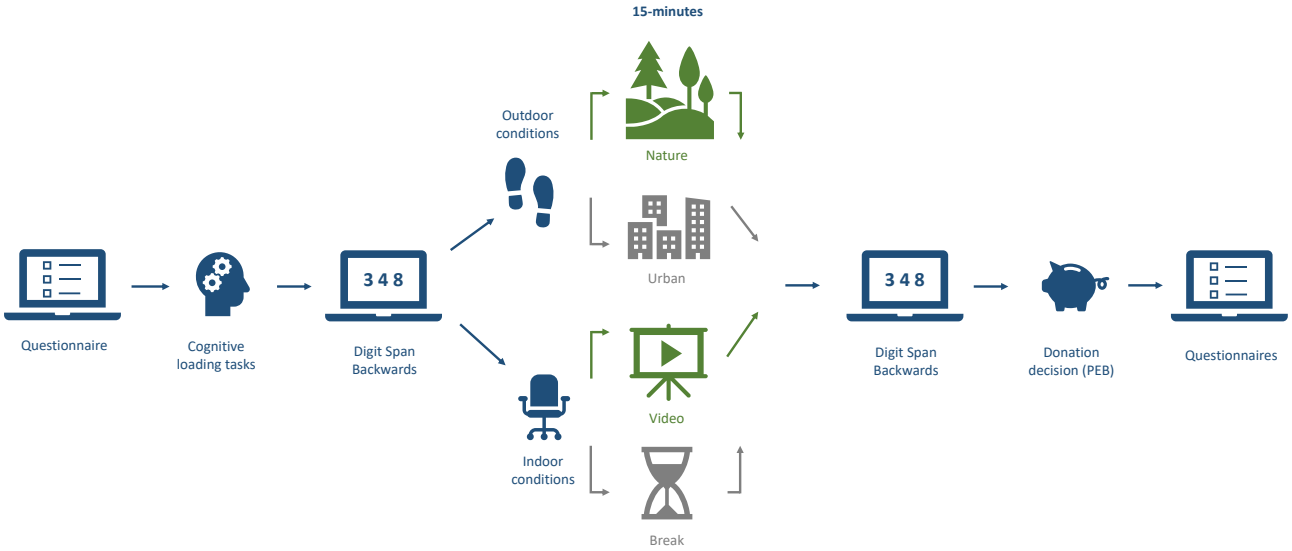
intervention, they completed further tasks and surveys in the lab on the computer. Please see Figure 2 for an overview of the study procedure. English translations of the instructions and all included surveys can be found in Section D in the Appendix.

2.2.1. Part 1 - Lab

Participants were informed of the approximate study duration and provided a consent form. They were instructed not to communicate with anyone throughout the study, and asked to silence and give up their phones, which they could only retrieve upon completion of the full study. Instructions were given on-screen.

The first set of questions elicited participant's levels of concern about ten current societal issues on 5-point Likert scales, presented in random order, ranging from AI ethics to immigration. One item was included about concern for global climate change and one about concern for biodiversity conservation, whereby the average of these two items served as indication of participant's general environmental concern at baseline. We introduced these in a set with eight other current societal

Figure 2: Flowchart of the Study Procedure.



issues to avoid potential priming effects. Elicitation before any of the treatments allowed us to later test and control for potential imbalances in environmental concern between conditions.

Participants were then given cognitively demanding mathematical and word-based tasks to complete, in order to induce attentional and cognitive fatigue (details can be found in Section D of the Appendix). Participant's attentional and cognitive fatigue were measured using the Digit Span Backwards (DSB) test (Tennessen and Cimprich, 1995), which we adapted for digital use in the lab (full code is available on OSF[3]). The DSB is a validated measure, which forms part of the Wechsler intelligence and memory scales for adults and children (Wambach et al., 2011) and has been used to assess cognitive fatigue (see e.g. Berman et al., 2009). Participants were required to recall a number in reverse order with progressively more digits.

2.2.2. Part 2 - Intervention

Participants then proceeded to their allocated intervention, either by remaining in the lab (VIDEO or BREAK), or by exiting the university building and either entering the adjacent park (NATURE), or walking towards the central train station in a trafficked urban area (URBAN). Due to the inherent differences in completion time of the first part of the experiment, participant departure from the lab was staggered. This meant that participants did not form groups, but proceeded to the assigned route individually. This helped ensure participants experienced their surroundings with minimal interference.

Participants in both outdoor conditions were instructed to walk within their respective environment for approximately 15 minutes, which was the estimated duration of the circular route they needed to follow in both cases. For participants in the indoor conditions (BREAK, VIDEO), part 3 of the study proceeded automatically after 15 minutes. In this way, none of the participants had to keep track of time or felt under time pressure, but the intervention duration was consistent across conditions.

[3] OSF project repository.

We provided participants in the outdoor conditions with route descriptions and a basic map displaying landmarks along the path. These handouts have been included in Section D of the Appendix. We instructed participants to arrive at a specific meeting point in the park and at the train station, respectively, where an assistant checked them off the participant list. This allowed us to verify that participants followed the correct path and remained in the assigned environment for the expected amount of time. By design, both of the outdoor routes were familiar to students, and the exposure to the environment began almost immediately upon exiting the lab: The park is located directly next to the social sciences faculty housing the lab; the main train station is a well-known city landmark.

2.2.3. Part 3 - Lab

After the intervention, participants in the outdoor conditions returned to the lab, while those in VIDEO and BREAK remained there. Participants were asked to indicate how restored they felt after the 15-minute activity or break on a 5-point Likert scale.[4] All participants then completed the DSB test again, to measure post-intervention cognitive fatigue.

Participants were then informed that they had a EUR 10 endowment available and were asked to make a decision about how to use it. They were given the option of donating any portion of it to a charitable organization and keeping the remainder for themselves (i.e., any amount from 0 to 10 could be donated or kept). Participants were presented with three charities in random order, one environmental conservation organization, one social welfare organization, and one organization fostering arts and culture. In order to obtain decision data of each participant for *all* charities, participants made three independent decisions (with an endowment of EUR 10 each), and were told they could choose how much to donate to each charity and how much to keep for themselves, but that only one charity would be selected at random and each charity had the same probability of being chosen. Thus, only the donation decision associated with the final randomly chosen charity was implemented and a maximum of EUR 10 was donated. This is akin to the "Strategy Method" as validated by, for example, Brandts and Charness (2011) and Mitzkewitz and Nagel (1993).[5] To advance to the donation stage, participants had to correctly answer four comprehension questions (see "Financial Decision" in Subsection D.8 in the Appendix). In our study, donation behavior towards the nature conservation charity served as a measure of PEB. By presenting two charities focused on different issues as alternative choices, we aimed to minimize any experimenter-demand or priming effects that could arise from the participants associating the nature video or outdoor walks with the conservation charity. Furthermore, it allowed for differentiation between pro-environmental and prosocial actions. All three organizations were Austrian non-for-profits, operating at a national

[4] Note that we used the German word "erholt", which captures the notion of restoration well, as it implies both a physical and mental recovery, and also invokes feelings of rest and refreshment.

[5] Providing a choice between multiple charities was important to minimize experimenter demand effects. We used the strategy method in order to capture greater variance of donations across all charities amid budget constraints, while still accurately capturing participant preferences.

scale.[6] This ensured relatively equal, limited renown of charities, and reduced the odds of one being preferred based on its prominence.

After entering their financial decisions, participants were asked to complete the revised Environmental Identity (EID) scale (Clayton, 2003; Clayton et al., 2021), and the widely used New Environmental Paradigm (NEP) scale (Dunlap et al., 2000). Environmental identity "incorporates emotional, behavioral, and cognitive aspects of a person's perceived relationship to the natural world" (Clayton et al., 2021, p. 2) and has been shown to be a strong predictor of behavior (Tam, 2013). Since identity is considered stable, we did not expect the measure to be influenced by the treatments. We also elicited participants average weekly nature visitation habits, what kind of environment they grew up in (urban, rural etc.), and how long they have been living in Innsbruck, and, in the NATURE and URBAN conditions, their perception of the pleasantness of the weather, as well as basic demographic information.

2.2.4. Analytical Approach

We conducted the subsequent analyses in accordance with our pre-analysis plan, registered on the Open Science Framework (OSF).[7] We sampled $N = 543$ individuals, just slightly over our required sample according to our a priori power analysis (see Appendix Section A)

We did not treat any specific condition as a control group, but compared both of the conditions exposed to nature via the nature walk (NATURE) or the video (VIDEO) to each of the non-nature conditions (URBAN and BREAK), as we hypothesized that the conditions exposed to nature would exhibit the highest portion of donors and the highest average donations. Significance levels of 5% are applied for statistical significance and 0.5% for high statistical significance in all analyses. Since our third hypothesis was that attention restoration would mediate the nature-PEB relationship, a necessary assumption was that nature would have a positive effect on restoration. We therefore tested whether the change in DSB score and self-reported restoration was greater among participants in the NATURE and VIDEO conditions, than those in the non-nature conditions. We also made pairwise comparisons of donation behavior and restoration between NATURE and VIDEO, as it would provide context for the strength of virtual nature as an alternative to a nature walk. We have marked this comparison as exploratory, as it was not part of the primary hypotheses. Each pairwise comparison provides different insights, outlined below.

- NATURE VS. URBAN: The comparison between the two outdoor conditions aims to isolate the importance of the natural environment, while keeping physical activity (walking outdoors) constant.

[6] "Naturschutzbund Österreich", "Hilfswerk Österreich", and "IG Kultur Österreich", respectively.
[7] OSF project repository.

- NATURE vs. BREAK: This comparison helps to discern whether the act of taking a break causes behavioral differences, or whether the natural environment and activity play a more critical role.
- VIDEO vs. BREAK: Comparing the two indoor (seated) conditions aims to determine the impact of exposure to virtual nature in a controlled setting.
- VIDEO vs. URBAN: This comparison can inform us whether walking outside, independent of the natural environment, can provide benefits over remaining seated viewing a nature video.
- NATURE vs. VIDEO (exploratory): Both stimuli contain natural elements like greenery, birdsong, and blue spaces, but activity level and environment differ. This comparison aims to provide a better understanding of the impact of real versus virtual nature.

Pro-Environmental Behavior

In order to test Hypothesis 1, that the portion of participants who donate to the nature conservation charity will be highest in the conditions exposed to nature, we conducted a multivariate marginal effects logistic regression model on donations made to the nature conservation charity as dependent variable (DV). The DV is a binary dummy of whether participants made a donation or not (0/1). For Hypothesis 2, that the average donation amount to the nature conservation charity will be highest in the conditions exposed to nature, we performed a multivariate marginal effects fractional regression on the portion of total endowment donated to the nature conservation charity. The coefficients indicate the percentage point change in the portion of the total endowment of EUR 10, donated to the conservation charity, relative to the respective reference category. We used these fractional response regressions with a logit link to properly handle the bounded nature of the outcome (ranging from 0 to 1). In both models, dummy variables BREAK, VIDEO, and URBAN denote participants' allocation to conditions, with NATURE as the reference category. We assessed differences in the coefficients of our regression models using post-estimation Wald tests and report corresponding chi-square (χ^2) test statistics. We also ran unpaired-sample z-tests of proportions and unpaired-sample t-tests for H1 and H2 respectively, to make in-text reporting easier.[8]

Attention Restoration

We used the Digit Span Backwards (DSB) test to calculate one of our two measures of attention restoration. The DSB score was computed by multiplying the total number of correctly recalled values by the highest number of correctly recalled digits. This allowed for more variation between subjects

[8] These tests are conceptually similar to the fractional and OLS regression models, respectively, when the regressions include only a single binary predictor representing two groups. The fractional and OLS regressions can accommodate multiple predictors, allowing for a more comprehensive analysis that can control for additional variables and explore more complex relationships.

than merely recording the highest attained number or the total number of correct responses.[9] We used the average pre-intervention DSB score as the baseline level and measured attention restoration by subtracting the pre-intervention from the post-intervention DSB score. Our second measure of attention restoration was participant's self-reported level of restoration post-intervention.

Robustness Analyses

To counter potential sample imbalances, we measured a comprehensive set of control variables, guided by insights from previous research. The full explanation for selected controls can be found in the Appendix Section B. The four conditions were reasonably balanced across age, gender, years living in Innsbruck, upbringing environment, and average time spent in nature per week. See Table 1 for an overview of the descriptive statistics and Table A19 for Spearman and Pearson correlation analyses between all variables. Despite randomization of our treatments, we found that the NATURE condition was comprised of significantly more environmentally concerned participants, as indicated by their (pre-intervention) self-reported concern for the environment. To avoid realized confounding, we control for this imbalance in all analyses where relevant. We used (cluster) robust standard errors in linear regression models to address heteroskedasticity and intra-cluster correlations.[10] Variance inflation factors (VIF) for each explanatory variable were below 1.6, indicating no risk of multicollinearity. As a manipulation check, we examined differences in attention restoration before and after the intervention among all conditions. As per our pre-registered criteria, we also performed the main analyses separately excluding participants whose submissions indicated clear lack of effort. Specifically, we removed participants from the analyses who did not attain at least 20% of correct responses in the mental math section of the cognitive loading task.

[9] Note that in this version of the DSB test, the task did not end after failure to recall a number, but rather all participants were required to complete all 14 rounds. Since recalling 7 digits is more effortful than recalling 4, we wanted to make sure all participants had to go through the same number of rounds, so as not to fatigue those attaining higher levels of recall more than participants who failed in earlier rounds.

[10] Clustering addressed the correlation in weather conditions within each of the 31 sessions, where all participants experienced the same weather, violating the independence assumption of standard regression models. This method also controlled for other intra-session correlations, ensuring accurate standard error estimates and reliable statistical inferences.

3. Results

Table 1: Summary Statistics. Pre- and Post-DSB scores refer to the performance on the Digit Span Backwards test conducted before and after the intervention, respectively. Delta DSB is the difference between the pre- and post-DSB measures and serves as a measure of attention restoration. Subjective restoration is captured on a 1-5 Likert scale. Responses to items in the EID and NEP scales have been averaged, with negative statements reverse-coded. Concern for the environment indicates average responses to concern for global climate change mitigation and biodiversity conservation, both captured on a 1-5 Likert scale. Weather condition was recorded during each experimental session by the experimenters, with 1 indicating inclement weather, and 5 indicating clear skies and low winds. Pleasantness of weather was reported by participants in the outdoor conditions, on a 1-5 Likert scale.

Variable	N	Mean	Fraction	Std. Dev.	Min	Pctl. 25	Pctl. 75	Max
Participants per Condition	543							
NATURE	138		25.6%					
URBAN	139		25.6%					
VIDEO	133		24.5%					
BREAK	132		24.3%					
Age in Years	543	22.47		3.06	18.00	20.00	24.00	43.00
Gender	543							
FEMALE	345		63.5%					
MALE	197		36.3%					
NON-BINARY	1		0.2%					
Hrs spent outside	543							
$0 - 4$	54		9.9%					
$5 - 9$	181		33.3%					
$10 - 14$	193		35.5%					
$15 - 20$	83		15.3%					
> 20	32		5.9%					
Years in Innsbruck	543	4.08		5.92	0.00	1.00	4.00	32.00
Upbringing	543							
LARGE CITY	56		10.3%					
SMALL CITY	136		25.0%					
MIXED RURAL & URBAN	88		16.2%					
RURAL	263		48.4%					
Donation to nature conservation charity	543	2.46		2.64	0.00	0.00	4.00	10.00
Donation to social welfare charity	543	2.14		2.51	0.00	0.00	3.45	10.00
Donation to art/culture charity	543	1.25		1.94	0.00	0.00	2.00	10.00
Pre-DSB Score	542	42.09		21.06	0.00	25.00	56.00	126.00
Post-DSB Score	541	53.14		23.54	0.00	36.00	70.00	126.00
Delta DSB Score	541	10.99		20.83	−57.00	−1.00	24.00	92.00
Subjective restoration	541		10.985	20.83	−57.00	−1.00	24.00	92.00
Environmental Identity Scale (EID)	543	4.23		0.45	2.36	4.00	4.57	5.00
Concern for environment	543	4.51		0.68	1.00	4.00	5.00	5.00
New Environmental Paradigm (NEP)	543	3.75		0.42	2.07	3.50	4.00	4.93
Weather condition	543	3.70		1.05	2.00	3.00	5.00	5.00
Pleasantness of weather	278	4.41		0.88	1.00	4.00	5.00	5.00

3.1. Pro-Environmental Behavior

3.1.1. Hypothesis 1 (H1): The portion of participants who donate to the nature conservation charity will be highest in the conditions exposed to nature.

We did not find evidence that the treatment condition had any significant effect on willingness to give to the nature conservation charity. Although the percentage of participants who donated any non-zero amount was highest in the NATURE condition with 74.64%, (see Figure 3a), contrary to our hypothesis (H1), the difference was not statistically significant (two-sided unpaired sample z-tests of proportions; NATURE — BREAK: 0.746 — 0.727 = 0.191, $z = 0.360$, $p = 0.721$; NATURE — URBAN: 0.746 — 0.662 = 0.084, $z = 1.540$, $p = 0.123$). We also did not observe a higher proportion of donors to the conservation charity among the VIDEO condition (two-sided unpaired sample z-tests of proportions; VIDEO — BREAK: 0.707 — 0.727 = -0.02, $z = -0.370$, $p = 0.711$; VIDEO — URBAN: 0.707 — 0.662 = 0.045, $z = 0.800$, $p = 0.426$). See Table A8 in the Appendix for further statistical details of other pairwise comparisons.

Table 2: Donation Behavior: Portion of participants (%) who made donations and average donation amounts (in EUR) to each charity by condition

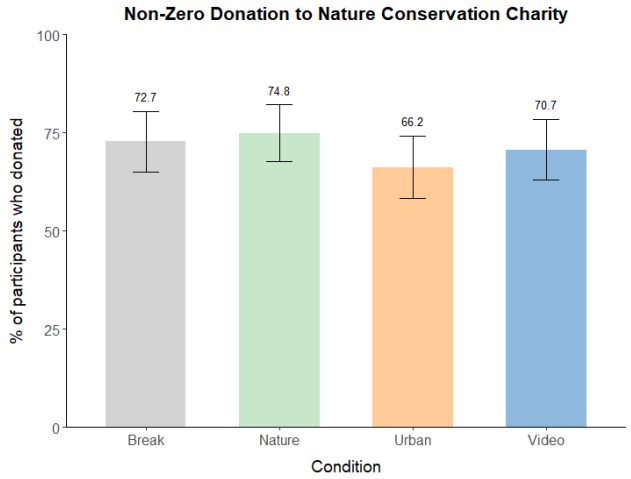
Condition	Conservation		Social		Art/Culture	
	% Donated	Avg. (EUR)	% Donated	Avg. (EUR)	% Donated	Avg. (EUR)
BREAK	72.73%	2.38	61.36%	1.93	46.21%	1.23
VIDEO	70.68%	2.08	69.17%	2.05	55.64%	1.17
URBAN	66.19%	2.38	56.12%	2.04	38.13%	1.13
NATURE	74.82%	2.95	76.26%	2.52	61.87%	1.49

3.1.2. Hypothesis 2 (H2): The average donation amount to the nature conservation charity will be highest in the conditions exposed to nature.

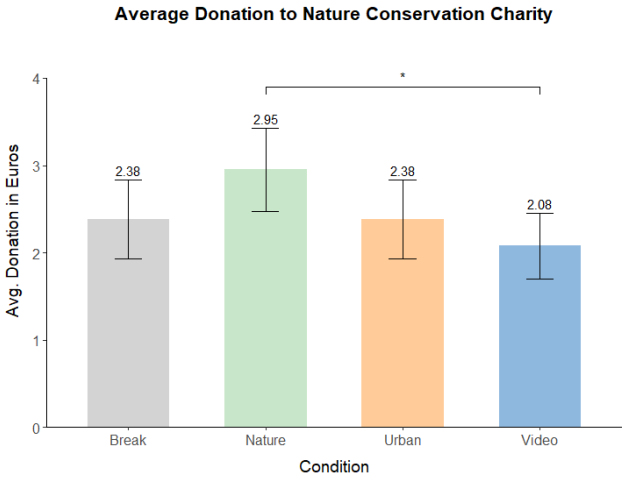
As seen in Figure 3b, the highest average donation to the conservation charity was made by participants in the NATURE condition (EUR 2.94). Surprisingly, the lowest average donation was made by participants in the VIDEO condition (EUR 2.08). Donations made by participants of the NATURE condition were not significantly greater than those made by participants in either the BREAK or URBAN conditions; that is, those not directly exposed to nature (two-sided unpaired sample t-tests; NATURE — BREAK: 2.945 — 2.383 = 0.562, $t(268) = 1.664$, $p = 0.097$; NATURE — URBAN: 2.945 — 2.382 = 0.563, $t(275) = 1.670$, $p = 0.095$).

We did not find any significant differences in the amount donated between the VIDEO and BREAK or URBAN conditions (two-sided unpaired sample t-tests; VIDEO — BREAK: 2.079 — 2.383 = -0.304, $t(263) = -1.013$, $p = 0.312$; VIDEO — URBAN: 2.079 — 2.382 = -1.004, $t(270) = 1.670$, $p = 0.095$). However,

Figure 3: Measures of Pro-Environmental Behavior (PEB)



(a) PEB Measure 1: Portion of participants (%) who made any donation to the nature conservation charity by condition. Portions do not differ significantly between conditions (two-sided unpaired sample z-tests of proportions). The whiskers show 95% confidence intervals. Figures on top of the upper 95% confidence intervals show mean values.



(b) PEB Measure 2: Average donation (EUR) to nature conservation charity by condition. *p $<$ 0.05, **p $<$ 0.005 (two-sided unpaired sample t-tests). The whiskers show 95% confidence intervals. Figures on top of the upper 95% confidence intervals show mean values.

with a Cohen's d $= 0.337$, donations made by participants assigned to the NATURE condition were significantly greater compared to those assigned to the VIDEO condition (two-sided unpaired sample t-test; NATURE $-$ VIDEO: $2.945 - 2.079 = 0.563$, $t(269) = 2.769$, $p = 0.006$). See Table A9 in the Appendix for further statistical details of all other pairwise comparisons. We did not find clear evidence in support of H2, but found evidence that a 15-minute nature walk can lead to greater PEB compared to watching a nature video.

Table 3: Multivariate marginal effects logistic (PEB Measure 1) and fractional regression (PEB Measure 2) models on indicators for donations made to the nature conservation charity. PEB Measure 1 indicates whether participants made a donation (binary dummy 1/0). PEB Measure 2 indicates the portion of the EUR 10endowment donated to the conservation charity. Dummy variables BREAK, VIDEO, and URBAN denote participants' allocation to conditions, using NATURE as the reference. We use cluster-robust standard errors at the session level (31 clusters). Post estimation Wald tests show test statistics for remaining comparisons (Chi^2). *p < 0.05, **p < 0.005.

	PEB Measure 1	PEB Measure 2
Condition (Reference: NATURE)		
BREAK	−0.021	−0.057
	(0.053)	(0.031)
VIDEO	−0.041	−0.088**
	(0.054)	(0.026)
URBAN	−0.086	−0.057
	(0.054)	(0.035)
Observations	543	543
Prob > Chi^2	0.435	0.006
Pseudo R^2	0.004	0.005
Post Estimation Wald-Tests (Chi^2):		
BREAK VS. VIDEO	0.137	1.517
VIDEO VS. URBAN	0.636	1.036

A marginal effects fractional regression model with logit link confirms the results from the two-sided unpaired sample t-tests (see Model I in Table 3). From the fractional regression model, we gain the additional insight that shifting from the NATURE condition to the VIDEO condition predicts an 8.70 percentage point decrease in the portion of endowment donated.

3.2. Attention Restoration

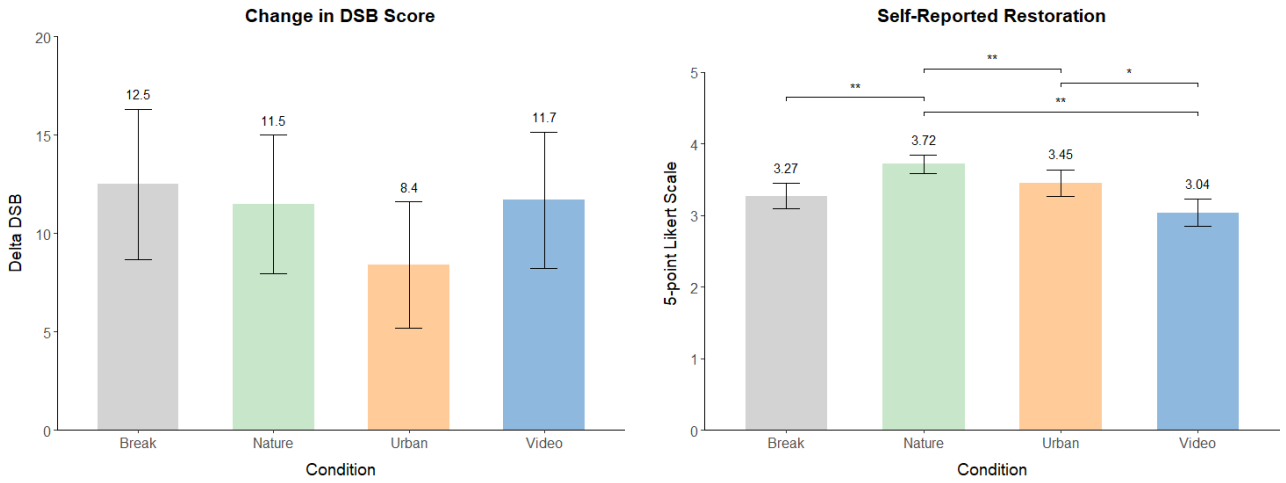
3.2.1. Hypothesis 3 (H3): Attention restoration mediates the higher donations in the conditions exposed to nature.

A necessary criterion of attention restoration as a mediator of the nature-PEB relationship is evidence that the NATURE and VIDEO conditions provided psychological restoration. Contrary to our prediction, we did not find either of the two conditions significantly more restorative than the BREAK or URBAN conditions, as measured via the DSB test. Visible in Figure 4a, the changes in DSB measures from pre- to post-intervention are not statistically different across conditions, implying that the treatments were similarly restorative. For full statistical outputs, see Tables A6 and A10 in the Appendix. Since we did not detect a difference in ΔDSB SCORE between any conditions, a mediation pathway via attention restoration measured using the DSB task cannot be established.[11]

[11] For completeness, mediation analyses on attention restoration measured using the DSB task for NATURE VS. URBAN, NATURE VS. BREAK, and NATURE VS. VIDEO can be found in Tables A17, A18, and A20 in the Appendix.

We also measured self-reported restoration, which tells a different story. As seen in Figure 4b, we found that, as expected, the NATURE condition was significantly more restorative compared to the BREAK and URBAN conditions, respectively (two-sided unpaired sample t-test; NATURE — BREAK: $3.717 - 3.273 = 0.444$, $t(268) = 4.030$, $p = 0.000$; $d = 0.489$; NATURE — URBAN: $3.717 - 3.453 = 0.264$, $t(275) = 2.276$, $p = 0.024$; $d = 0.274$). In an exploratory analysis we found that the NATURE condition was significantly more restorative than the VIDEO condition (two-sided unpaired sample t-test; NATURE — VIDEO: $3.717 - 3.038 = 0.679$, $t(269) = 5.817$, $p = 0.000$; $d = 0.704$). Surprisingly, participants shown the video felt less restored than participants assigned to the URBAN condition (two-sided unpaired sample t-test; VIDEO — URBAN: $3.038 - 3.453 = -0.415$, $t(270) = -3.030$, $p = 0.003$; $d = 0.368$) but we found no difference between conditions VIDEO and BREAK. For statistical details of all pairwise comparisons, see Table A7 in the Appendix.

Figure 4: Attention Restoration



(a) Attention restoration per condition, as measured via the difference between the pre-intervention and post-intervention Digit Span Backwards (DSB) test scores. Two-sided unpaired sample t-tests. The whiskers show 95% confidence intervals. Figures on top of the upper 95% confidence intervals show mean values.

(b) Self-reported restoration per condition, measured on a Likert scale from 1-5. *$p < 0.05$, **$p < 0.005$ (two-sided unpaired sample t-tests). The whiskers show 95% confidence intervals. Figures on top of the upper 95% confidence intervals show mean values.

Given our finding that the NATURE condition had a positive self-reported restorative effect, we investigated whether self-reported restoration mediated the nature-PEB relationship. For this analysis, we focused on the comparison between NATURE and VIDEO conditions, as it was the only one showing a statistically significant difference in donations, a necessary criterion for establishing a mediation pathway. We found correlations between environmental concern and our treatments, outcome, and mediator, as well as between environmental identity and the mediator (see Table A19 in the Appendix). To avoid confounding, we controlled for both environmental concern and environmental identity in our mediation analysis, using the "paramed" package in Stata.

Table 4: Paramed Mediation Analyses (VIDEO vs. NATURE) on the absolute amount donated to the conservation charity. Model (I) does not include control variables. Model (II) controls for EVNIRON. CONCERN and ENVIRON. IDENTITY SCALE (EID). The controlled direct effect is estimated at a level of zero of SUBJECTIVE RESTORATION in both conditions. The natural direct effect is estimated at the actual levels of SUBJECTIVE RESTORATION in conditions VIDEO and NATURE. Standard errors in parentheses. $^{*}p < 0.05$, $^{**}p < 0.005$.

	Effect: NATURE → PRO-ENVIRONMENTAL BEHAVIOR (PEB)	
	Mediator: SUBJ. ATT. REST.	
	Model (I)	Model (II)
CONTROLLED DIRECT EFFECT	−1.566	−1.486
	(1.256)	(1.231)
NATURAL DIRECT EFFECT	0.411	0.311
	(0.370)	(0.362)
NATURAL INDIRECT EFFECT	0.464*	0.345
	(0.210)	(0.196)
MARGINAL TOTAL EFFECT	0.876*	0.656*
	(0.315)	(0.309)
Observations	272	272
Control Variables	No	Yes

We found no significant controlled direct effect, nor a significant natural direct effect of nature on PEB.[12] We did, however, find a significant indirect effect of self reported attention restoration on PEB (see Model I in Table 4), meaning that the effect of real nature experience on PEB was mediated by SUBJECTIVE RESTORATION. Interestingly, this effect became non-significant when controlling for environmental concern and nature identity (see Model II). Exploring this further, we found that when controlling for environmental identity alone, the mediation effect persisted, but when controlling only for environmental concern (which was unbalanced in our sample), the mediation effect became non-significant. We know from correlation Table A19 that environmental concern was positively associated with PEB and subjective restoration. Although attenuated, the effect of nature on subjective restoration held when controlling for environmental concern. This in turn means that the effect of nature on subjective restoration was overestimated in our sample, because we had more environmentally concerned participants in the NATURE condition. These individuals experienced a stronger restoration from being in nature. We note that the total effect of nature on PEB remained significant when controlling for environmental concern and nature identity.

In sum, we found an indirect effect of nature experience on PEB through subjective restoration, which was explained by the higher levels of environmental concern of participants in the NATURE condition.

[12] Note that for the former, the effect was calculated at a level / magnitude of attention restoration of zero in both VIDEO and NATURE conditions, while for the latter, the effect was calculated at the respective average levels of self-reported restoration observed in the two conditions.

3.3. Pre-Registered Exploratory Analyses

3.3.1. Environmental Attitudes as Mediator

Given prior evidence that environmental attitudes might also play a role in the effect of nature exposure on PEB (Whitburn et al., 2019), we examined its possible role as a mediator using the NEP scale. We did not find any significant correlations between attitudes and treatment conditions (see Table A19, Row (3), Column (2) for Pearson ($p = 0.648$) and Row (2), Column (3) for Spearman ($p = 0.277$) correlations respectively) and did not find evidence for an indirect effect of nature on PEB through environmental attitudes (see Table A21 in the Appendix).

3.3.2. Prosocial Behavior

We were also curious whether donation behavior overall was affected by the conditions. Donations to the nature conservation organization, both in frequency and amount, significantly outmatched those to the art and culture charity across all conditions (see Table 5. The social welfare organization also received more frequent and higher donations than the art and culture charity, regardless of the treatment condition (statistical tests can be found in Tables A15 and A16 in the Appendix).

Table 5: Overall Donation Behavior: Average donation amount (in EUR) made and portion of participants who donated to any of the three charities (Conservation, Social, and Art / Culture) by condition

	BREAK	NATURE	URBAN	VIDEO
Average donation (EUR)	1.85	2.32	1.85	1.77
Portion of participants who donated	74.24%	80.58%	69.06%	80.45%

A significantly greater portion of participants in the NATURE and VIDEO conditions donated to any of the three charities, compared to those in the URBAN condition (see Model I in Table A13). However, the difference between the NATURE and the URBAN condition became insignificant upon controlling for environmental concern, thus accounting for sample imbalances. Participants in the NATURE condition donated significantly more generously than those in the VIDEO condition (see Model I in Table A14). This result is consistent with PEB Measure 2 (size of donation). However, this difference also became insignificant when controlling for environmental concern (detailed results are found in Tables A13 and A14 in the Appendix).

3.4. Robustness Analyses

We conducted additional robustness checks for the models testing Hypothesis 1 and Hypothesis 2. For each, we included one model without any controls, one model controlling for any imbalanced

variables, and one model with the full set of control variables. A detailed list of all control variables can be found in Appendix Section B.1 and the complete models incorporating the point-estimates of all covariates are displayed in Tables A1 and A2 of the Appendix. The results remained robust across all three models with covariates, as the difference between the NATURE and VIDEO conditions remained statistically significant. Additional analyses, comparing conditions while accounting for covariate levels of the specific conditions, confirmed our findings. Results are are shown in Appendix Tables A11 (logistic regression for H1) and A12 (fractional regression for H2). Combined nature conditions are reported in Appendix Tables A3 (logistic regression for H1) and A4 (fractional regression for H2).

We also performed a manipulation check, to test whether the treatments had any effect on directed attention. We compared pre- and post- DSB scores across all four conditions applying two-sided paired sample t-tests, and found that the post-intervention scores were significantly higher across all four conditions (see Table A5 in the Appendix). This suggests that, following tasks inducing cognitive fatigue, the interventions effectively restored participants' attention. Thus, spending 15-minutes taking a break, viewing a video, or going for a walk in a park or urban area, appears to provide restorative benefits.

Finally, as per our pre-registered criteria, we re-ran models testing Hypothesis 1 and 2 (PEB measures 1 and 2 respectively), excluding 26 individuals who did not attain at least 20% of correct responses in the mental math section of the cognitive loading task, as this is indicative of lack of effort. We found that the amount donated to the conservation organization now marginally significantly differs ($p = 0.05$) also between the NATURE and BREAK conditions (see Table A22). This significance vanished once we controlled for environmental concern. The results of the multivariate marginal effects logistic regression (PEB Measure 2) remain robust (see Table A23).

4. Discussion and Conclusion

The importance of human connection with nature has been well-documented. Nature experiences are important for health and well-being (Jimenez et al., 2021), with psychological restoration cited as a key benefit (Berto, 2014). There is also evidence of a connection between time spent in nature and pro-environmental behavior (PEB) (see, e.g., Whitburn et al., 2019; Alcock et al., 2020; Martin et al., 2020). However, measuring observed PEB, following an experimental manipulation of nature exposure, remains a novelty in the literature. In this study we set out to test and understand the causal effects of nature experience on observed PEB and to investigate whether attention restoration mediates this effect. We conducted a randomized controlled trial in which we measured attention restoration and PEB after 15 minutes spent walking in a natural environment (NATURE), walking in an urban environment (URBAN), watching a video of a nature walk in first-person view (VIDEO), or taking a break in the lab (BREAK).

We measured participants' PEB by providing them with a EUR 10 windfall endowment and the choice to keep or donate any portion of it to one of three charitable organizations: one dedicated to nature conservation, one to social welfare, and one to arts and culture. Donations to the nature conservation organization—(1) whether any non-zero donation was made, and (2) the portion of endowment donated—served as our measures of PEB. Importantly, donations came at a direct cost to the participants, mirroring the cost of individual environmental action.

4.1. Pro-Environmental Behavior

We did not find clear evidence that exposure to nature leads to greater pro-environmental behavior. We did not observe any differences in the portion of donors to the conservation charity between the NATURE, VIDEO, URBAN and BREAK conditions. Neither did we find that participants in the NATURE and VIDEO conditions donated higher average amounts to the nature conservation charity than did participants in either the URBAN or BREAK conditions. In an exploratory analysis we did, however, find that participants in the NATURE condition donated significantly higher amounts on average (EUR 2.94) to the conservation charity compared to participants in the VIDEO condition (EUR 2.08). As we did not find a higher portion of donors, but a willingness to give more, it could be that a one-time nature exposure has the potential to amplify, rather than provoke, PEB compared to virtual nature exposure. The fact that the video condition performed significantly worse than the nature walk in terms of inducing PEB, suggests that experiencing nature via direct exposure outside, matters.

There are several possible explanations for the non-significance of our hypotheses tests. Firstly, the participants of this study appear to already be engaged with the natural world, which may have rendered the nature exposure assigned in the study less impactful. Reported nature experiences per week among study participants was higher than European or U.S. averages, with 57% of participants reporting spending 10 or more hours outside per week on average and 20% reporting spending 15 hours or more. Innsbruck, as an alpine city, attracts many active and mountain-sport oriented students, presenting an inherent self-selection bias within the student body. According to adaptation level theory (Helson, 1964), and previously discussed by Purcell et al. (2001), people become accustomed to their environments, suggesting that those surrounded by more natural environments may require a higher level of nature exposure to experience the same benefits than those surrounded by built environments. It is possible that a subject pool from an area less immersed in nature day-to-day may have responded more positively to the intervention. Work by Davis and Gatersleben (2014) has also shown that whether a wild or manicured natural environment was perceived as more positively or negatively, was influenced by the level of nature-connectedness of the visitors. We found our sample to report a strong nature identity, with a median value of 4.3 out of 5 reported on the 14-item Nature Identity Scale (Clayton, 2003). It was not insightful to test for a moderating effect of environmental identity, because of the high level of homogeneity we observed. However, it may be an interesting avenue for future research, which, using a more heterogeneous sample, could yield different results.

Secondly, the physical setting of the study in an Alpine environment may have influenced the relative perception of the selected urban and nature walks. Views to the mountains were visible in both outdoor conditions. Prior research has found that environments with little evidence of "human-induced change" are considered more restorative (Purcell et al., 2001). One could speculate that a view to the mountains might make the park more restorative, however, it is perhaps the juxtaposition to the proximity of remote nature in the high Alps that makes the selected park appear *less* natural. On the other hand, the view to the mountains during the urban walk provided some nature exposure, possibly tempering the differences between the two selected environments. It may be that experience in a more remote environment could have elicited stronger responses. Alternatively, the same study conducted in a more urban environment, or an area with less contrasting wild nature in close proximity, may also have yielded different and possibly stronger results. Future research could explore differences in study setting by varying the degree of "natural" or wild environments and participant's subjective perception thereof.

Thirdly, we acknowledge that the intervention was of relatively short duration. In a recent study by Sudimac et al. (2022), which investigates effects of natural and urban environments on stress-related brain mechanisms, participants were exposed to the respective environments for 60 minutes. It is possible that a 15-minute nature experience was insufficient to trigger a sufficiently large effect, especially considering our setting and sample. Relatedly, it may be the case that the true effect is smaller than we were statistically powered to reliably detect, which would imply a higher false negative rate given the sample size of the present study.

Though we consider it a strength of this study, one consequence of using an observable measure of PEB via a donation task, is that we necessarily capture only one element of PEB, namely charitable giving. Of course, there are many other forms of environmental action, which may carry a personal but non-financial cost. How closely lab tasks correlate with real world behavior remains an open discussion among behavioral economists (Levitt and List, 2007). Evidence suggests that prosocial lab tasks like Public Goods Games and donation tasks correlate with real world behavior in terms of cooperative behavior (Reindl et al., 2019), prosocial giving (Benz and Meier, 2008) and also to voluntary climate actions (Goeschl et al., 2020), especially when the marginal per-capita return is zero (as in our setup). We cannot definitively conclude that giving to the nature conservation charity in our setting will translate to other environmental actions, but we can say that our measure captures a willingness to forego personal financial reward for the benefit of an environmental cause. Future research could examine how well this specific giving paradigm correlates with other scales of pro-environmental behavior.

Finally, another potential limitation of our study is that we did not require participants to choose between charities, which could have influenced the results. Our design allowed donations to multiple charities to capture independent preferences rather than force a trade-off (for example between prosocial and pro-environmental behavior). This approach aimed to measure the inherent preference

for each charity, highlighting the trade-off between charitable donations and participants' financial interest, rather than between different charitable causes.

4.2. Attention Restoration

We also investigated whether restoration could be a mechanism explaining the relationship between nature and pro-environmental behavior (PEB). Measured by the Digit Span Backwards (DSB) test, we did not find evidence of a greater level of restoration in the NATURE or VIDEO conditions compared to other conditions, but did find that self-reported levels of restoration (SUBJECTIVE RESTORATION) were significantly higher in the NATURE condition compared to all other conditions, and were lowest in the VIDEO condition.

Participants in all conditions performed better on the DSB test after the 15-minute interventions, suggesting that a break was cognitively restorative. The increase in overall scores in the repeated DSB Test may also be partially attributed to learning effects. The difference between the DSB and subjective measure of restoration suggests they are capturing different aspects of restoration. We would expect cognitive restoration after a break (Helton and Russell, 2015), which all treatments offered, whereas the self-reported measure may be capturing additional improvements in subjective well-being, which were unique to the nature walk.

Examining the difference in donations between the NATURE and VIDEO conditions, we found an indirect effect of nature experience on PEB through self-reported restoration. This effect became non-significant, however, after controlling for environmental concern, implying that attention restoration as a mechanism was driven by more environmentally concerned individuals who were over-represented in the NATURE condition. Attention restoration mediating the nature-PEB relationship amongst those who already feel more concerned about the environment aligns with our finding that average donations, but not percentage of donors, is affected by the treatment. It may be that more environmentally concerned individuals are more prone to experience psychological restoration from being in nature, which in turn increases their willingness to donate greater amounts; that is, to behave more pro-environmentally. This interpretation is consistent with prior work by Byrka et al. (2010), who found that individuals who more strongly endorsed using natural environments for psychological restoration, scored higher on the General Ecological Behavior Scale (Kaiser and Wilson, 2000). Unlike (Byrka et al., 2010), who used self-reported measures for nature visitation and PEB, we did not find that environmental attitudes, as measured via the New Environmental Paradigm (NEP) Scale, emerged as a mediator.[13]

An unexpected finding was the comparatively low level of restorativeness produced by the nature video. The URBAN and NATURE conditions were both significantly more restorative than the VIDEO condition, suggesting that the act of walking outside was beneficial. Previous studies testing attention

[13] Note, however, that our measure of environmental concern, for which we needed to control due to sample imbalance, significantly correlates with environmental attitudes (Spearman correlation of 0.436 and Pearson correlation of 0.511).

restoration using videos of nature scenes yielded mixed results. van den Berg et al. (2003) found that participants who viewed a 7-minute video of a simulated nature walk performed better on a concentration task than those who viewed a video of a built environment of the same duration. Laumann et al. (2003) on the other hand, did not find improvements in directed attention among participants who viewed a 20-minute video of a natural environment, compared to those who viewed a video of an urban environment. Mayer et al. (2009) found that viewing a 10-minute simulated nature walk video significantly influenced positive affect, compared to viewing an urban walk of the same duration, but had no effect on attentional capacity. In combination with evidence from the present study, it does not seem clear that indirect exposure to nature via videos can replace real nature experiences as a means of restoration. Moreover, our findings indicate that a 15-minute walk outside, be it in an urban or natural environment, has more restorative properties than passively viewing a simulated nature walk.

We note that some participants reported feeling bored watching the selected video (captured in an optional study feedback question). It is possible that for the 15-minute duration, it might have been too monotone. The Calm Spot app, which displays a 2-minute nature video for replenishing children's attention in schools, includes multiple angle views and changing shots. Authors intentionally included such features to support engagement (Moreno et al., 2018). The selected video for the present study was a single first-person-view; perhaps a more varied scene or a shorter video might have been more effective, but this would have to be investigated further.

4.3. Prosocial Behavior

In a pre-registered exploratory analysis, we additionally found that the overall portion of participants who donated to any of the three charities was higher in the NATURE and VIDEO conditions, relative to the URBAN condition, respectively. Moreover, the average donations (to any of the charities) was greatest in the NATURE condition, but this was statistically significant only relative to the VIDEO condition. This suggests that a 15-minute nature walk could have motivated not only pro-environmental, but also prosocial behavior more broadly. We observed, however, that the differences between the NATURE and URBAN and NATURE and VIDEO conditions, respectively, became insignificant when controlling for environmental concern (due to sample imbalances), implying that more environmentally concerned individuals donated more generously and drove this effect. Recent work by Otto et al. (2021) has shown that prosocial propensity, as measured through altruism and honesty-humility, predicts PEB, respectively. Thus, PEB may be also be underpinned by prosociality.

4.4. Conclusion

Despite considerable correlational evidence for a connection between nature experiences and pro-environmental behavior (PEB), to the best of our knowledge, this is the first study to assign actual

nature exposure and test its effect on observed PEB. Although the present research was unable to confirm the causality of this link, we found that experiencing nature via a walk in a park can lead to greater PEB, as compared to watching a nature video. We found that participants assigned to a nature walk did not donate more frequently to the conservation charity than those in other conditions, but those who chose to donate, donated more, on average, compared to participants shown a nature video. This might suggest that a one-time nature exposure has the potential to amplify, rather than provoke, PEB. We further found an indirect effect of nature experience on PEB through self-reported restoration. This effect became non-significant, however, after controlling for environmental concern due to sample imbalances, implying that attention restoration as a mechanism was driven by more environmentally concerned individuals. Having taken our participants into actual urban and natural environments, very similar to their everyday lived experiences, speaks to the ecological validity of this work. Further research could test these findings in different natural settings, for example by varying the degree of wild nature, and within different geographic and population contexts, such as the general population of larger urban areas. In light of the growing threat to biodiversity we face today, increasing nature experiences could be an important avenue, not only for increased health and well-being, but also for behavior-change.

CRediT authorship contribution statement

Sarah Lynn Flecke: Conceptualization, Methodology, Formal analysis, Investigation, Resources, Visualization, Writing – original draft, Writing – review and editing, Project administration
Jürgen Huber:
Michael Kirchler:
Rene Schwaiger: Methodology, Software, Formal analysis, Investigation, Visualization, Writing – original draft, Writing – review and editing, Project administration

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Appendices

for Online Publication

A. Justification of Sample Size

We performed an a priori power analysis to determine the sample size needed to reliably detect a small to medium sized standardized effect equal to or larger than Cohen's $h/d = 0.35$, given a Type I error rate of $\alpha = 0.05$ in two-sided equality of proportions z-tests and two-sided unpaired sample t-tests. With these parameters and a statistical power of 80%, we required a total sample of 500 participants, with 125 individuals per condition.

B. Explanation for Control Variables

Recognizing the influence of upbringing on PEB, we incorporated self-reported indicators for the type of environment participants grew up in, categorized as SMALL CITY, MIXED RURAL & URBAN, LARGE CITY, with RURAL as the reference category. We also accounted for the years lived in the alpine city of Innsbruck. Additionally, given the established association between nature connectedness and PEB, we included a measure of environmental identity using the Environmental Identity (EID) scale (Clayton, 2003; Clayton et al., 2021), as well as the average time spent in nature per week in hours, with $0 - 4$ as the reference category. We included baseline environmental concern in our set of control variables, in order to ensure the same pre-intervention level in each condition. We also included participant age, and gender (coded in the dummy variable FEMALE, with 1 for females and 0 for males). Finally, since the experimental sessions spanned several weeks, we controlled for weather effects.

Since we elicited participants' environmental attitudes at the end of the study via the NEP scale (Dunlap et al., 2000), we considered that the conditions themselves might have influenced responses. We intentionally placed the scale after the intervention to avoid priming participants. It is also possible that attitudes could have affected PEB. We, therefore, did not include attitudes in the main regression models to avoid underestimating the total effect, but treated environmental attitudes as a mediator.

B.1. Description of Variables Included in Regressions

- EVNIRON. CONCERN: the average of participant responses to their reported concern about global climate change and biodiversity conservation respectively. Each reported on Likert scale from 1-5
- Gender is represented by the FEMALE dummy variable , with 1 coded for females, 0 for males
- SMALL CITY, MIXED RURAL & URBAN, and LARGE CITY capture the environments in which participants grew up, with RURAL as the reference category

- HOURS IN NATURE (PER WEEK): quantifies the hours spent outside in nature in a typical week, with $0 - 4$ hours as the reference category
- AGE IN YEARS: participant age
- ENVIRON. IDENTITY SCALE (EID): the average score of all items of the Environmental Identity Scale, with negative statements reverse-coded
- YEARS IN INNSBRUCK: years residing in Innsbruck (incl. surroundings) at time of study
- SUBJ. WEATHER: a per-session assessment of the weather condition, which was recorded at the start of each experimental session by the researchers on a scale of 1-5, with 5 presenting near-ideal, sunny and pleasant conditions.

C. Additional Tables and Figures

Table A1: Multivariate marginal effects logistic regression models on an indicator for donations made to the nature conservation charity. The dependent variable is a binary dummy of whether participants made a donation. Dummy variables BREAK, VIDEO, and URBAN denote participants' allocation to conditions, using NATURE as the reference. EVNIRON. CONCERN averages participant responses to global climate change and biodiversity conservation concerns. Gender is encoded by the FEMALE and NON-BINARY dummy variables (0 for males, 1 for females, and 2 for non-binary individuals). The 'non-binary' gender category, contains only one observation and may be omitted due to perfect collinearity or lack of variation in some models. Categories SMALL CITY, MIXED RURAL & URBAN, and LARGE CITY capture participants' upbringing environments, using RURAL as the reference. HOURS IN NATURE (PER WEEK) quantifies weekly hours participants spend in nature, with $0-4$ as the reference. AGE IN YEARS, ENVIRON. IDENTITY SCALE (EID), YEARS IN INNSBRUCK, and SUBJ. WEATHER denote participant age, environmental identity scale average, years residing in Innsbruck, and per-session weather assessments by the researchers respectively. We use cluster-robust standard errors at the session level (31 clusters). Post estimation Wald tests show test statistics (Chi^2). *p < 0.05, **p < 0.005.

	Model (I)	Model (II)	Model (III)
Condition (Reference: NATURE)			
BREAK	−0.021	0.005	0.018
	(0.053)	(0.053)	(0.041)
VIDEO	−0.041	−0.007	0.009
	(0.054)	(0.053)	(0.051)
URBAN	−0.086	−0.060	−0.043
	(0.054)	(0.054)	(0.048)
Environmental Concern			
EVNIRON. CONCERN		0.144**	0.091**
		(0.025)	(0.026)
Gender (Reference: MALE)			
FEMALE			0.165**
			(0.052)
Upbringing (Reference: RURAL)			
MIXED RURAL & URBAN			0.050
			(0.060)
SMALL CITY			−0.024
			(0.055)
LARGE CITY			0.114*
			(0.052)
Hours in Nature (Reference: $0-4$)			
$5-9$			0.080
			(0.042)
$10-14$			0.089
			(0.077)
$15-20$			0.013
			(0.084)
>20			−0.072
			(0.096)
Other Control Variables			
AGE IN YEARS			−0.009
			(0.007)
ENVIRON. IDENTITY SCALE (EID)			0.112*
			(0.052)
SUBJ. WEATHER			0.011
			(0.018)
YEARS IN INNSBRUCK			−0.006*
			(0.002)
Observations	543	543	542
Prob > Chi^2	0.435	0.000	0.000
Pseudo R^2	0.004	0.050	0.119
Post Estimation Wald-Tests (Chi^2):			
BREAK VS. VIDEO	0.137	0.051	0.031
VIDEO VS. URBAN	0.636	0.977	0.891

Table A2: Multivariate marginal effects fractional regression on the portion of total endowment donated to the nature conservation charity. The dependent variable is represented by the fraction of the endowment of EUR 10 donated to the conservation charity. Dummy variables BREAK, VIDEO, and URBAN denote participants' allocation to conditions, using NATURE as the reference. EVNIRON. CONCERN averages participant responses to global climate change and biodiversity conservation concerns. Gender is encoded by the FEMALE and NON-BINARY dummy variables (0 for males, 1 for females, and 2 for non-binary individuals). The 'non-binary' gender category, contains only one observation and may be omitted due to perfect collinearity or lack of variation in some models. Categories SMALL CITY, MIXED RURAL & URBAN, and LARGE CITY capture participants' upbringing environments, using RURAL as the reference. HOURS IN NATURE (PER WEEK) quantifies weekly hours participants spend in nature, with $0-4$ as the reference. AGE IN YEARS, ENVIRON. IDENTITY SCALE (EID), YEARS IN INNSBRUCK, and SUBJ. WEATHER denote participant age, environmental identity scale average, years residing in Innsbruck, and per-session weather assessments by the researchers respectively. We use cluster-robust standard errors at the session level (31 clusters). Post estimation Wald tests show test statistics (Chi^2). $^{*}p < 0.05$, $^{**}p < 0.005$.

	Model (I)	Model (II)	Model (III)
Condition (Reference: NATURE)			
BREAK	−0.057	−0.039	−0.036
	(0.031)	(0.032)	(0.030)
VIDEO	−0.088**	−0.065*	−0.063*
	(0.026)	(0.030)	(0.026)
URBAN	−0.057	−0.041	−0.031
	(0.035)	(0.032)	(0.034)
Environmental Concern			
EVNIRON. CONCERN		0.118**	0.096**
		(0.020)	(0.021)
Gender (Reference: MALE)			
FEMALE			0.080**
			(0.028)
NON-BINARY			0.116
			(0.075)
Upbringing (Reference: RURAL)			
MIXED RURAL & URBAN			0.009
			(0.027)
SMALL CITY			0.004
			(0.033)
LARGE CITY			0.043
			(0.037)
Hours in Nature (Reference: $0-4$)			
$5-9$			0.013
			(0.039)
$10-14$			0.017
			(0.044)
$15-20$			−0.023
			(0.053)
>20			0.014
			(0.063)
Other Control Variables			
AGE IN YEARS			−0.001
			(0.005)
ENVIRON. IDENTITY SCALE (EID)			0.046
			(0.039)
SUBJ. WEATHER			0.009
			(0.009)
YEARS IN INNSBRUCK			−0.000
			(0.002)
Observations	543	543	543
Prob > Chi^2	0.006	0.000	0.000
Pseudo R^2	0.005	0.028	0.040
Post Estimation Wald-Tests (Chi^2):			
BREAK VS. VIDEO	1.517	0.779	1.027
VIDEO VS. URBAN	1.036	0.663	1.154

Table A3: Multivariate marginal effects logistic regression models on an indicator for donations made to the nature conservation charity. The dependent variable is a binary dummy of whether participants made a donation. The dummy variable NATURE EXPOSURE equals 1 for participants in conditions exposed to nature, thus VIDEO and NATURE and 0 for conditions BREAK and URBAN. The complete set of controls ("All") comprises the following variables, which were added to the model but omitted from the output: EVNIRON. CONCERN averages participant responses to global climate change and biodiversity conservation concerns. Gender is encoded by the FEMALE and NON-BINARY dummy variables (0 for males, 1 for females, and 2 for non-binary individuals). The 'non-binary' gender category, contains only one observation and may be omitted due to perfect collinearity or lack of variation in some models. Categories SMALL CITY, MIXED RURAL & URBAN, and LARGE CITY capture participants' upbringing environments, using RURAL as the reference. HOURS IN NATURE (PER WEEK) quantifies weekly hours participants spend in nature, with $0 - 4$ as the reference. AGE IN YEARS, ENVIRON. IDENTITY SCALE (EID), YEARS IN INNSBRUCK, and SUBJ. WEATHER denote participant age, environmental identity scale average, years residing in Innsbruck, and per-session weather assessments by the researchers respectively. We use cluster-robust standard errors at the session level (31 clusters). Post estimation Wald tests show test statistics (Chi^2). *p < 0.05, **p < 0.005.

	Model (I)	Model (II)	Model (III)
NATURE EXPOSURE	0.034	0.025	0.017
	(0.039)	(0.038)	(0.033)
Observations	543	543	542
Prob > Chi^2	0.379	0.000	0.000
Pseudo R^2	0.001	0.047	0.117
Controls	No	EVNIRON. CONCERN	All

Table A4: Multivariate marginal effects fractional regression on the portion of total endowment donated to the nature conservation charity. The dependent variable is represented by the fraction of the endowment of EUR 10 donated to the conservation charity. The dummy variable NATURE EXPOSURE equals 1 for participants in conditions exposed to nature, thus VIDEO and NATURE and 0 for conditions BREAK and URBAN. The complete set of controls ("All") comprises the following variables, which were added to the model but omitted from the output: EVNIRON. CONCERN averages participant responses to global climate change and biodiversity conservation concerns. Gender is encoded by the FEMALE and NON-BINARY dummy variables (0 for males, 1 for females, and 2 for non-binary individuals). The 'non-binary' gender category, contains only one observation and may be omitted due to perfect collinearity or lack of variation in some models. Categories SMALL CITY, MIXED RURAL & URBAN, and LARGE CITY capture participants' upbringing environments, using RURAL as the reference. HOURS IN NATURE (PER WEEK) quantifies weekly hours participants spend in nature, with $0 - 4$ as the reference. AGE IN YEARS, ENVIRON. IDENTITY SCALE (EID), YEARS IN INNSBRUCK, and SUBJ. WEATHER denote participant age, environmental identity scale average, years residing in Innsbruck, and per-session weather assessments by the researchers respectively. We use cluster-robust standard errors at the session level (31 clusters). Post estimation Wald tests show test statistics (Chi^2). *p < 0.05, **p < 0.005.

	Model (I)	Model (II)	Model (III)
NATURE EXPOSURE	0.014	0.009	0.004
	(0.025)	(0.022)	(0.022)
Observations	543	543	543
Prob > Chi^2	0.562	0.000	0.000
Pseudo R^2	0.000	0.025	0.037
Controls	No	EVNIRON. CONCERN	All

Table A5: Manipulation Check: Post-Intervention Attention Restoration Two-sided paired sample t-test of pre- vs post-intervention Digit Span Backwards test scores by condition. *p $<$ 0.05, **p $<$ 0.005.

								95% Conf. Bounds	
Condition	N	Mean diff	DF	t-stat.	Cohen's d	p	Signif.	Lower	Upper
BREAK	131	12.496	130	−6.387	0.570	0.000	**	−16.367	−8.625
NATURE	138	11.464	137	−6.347	0.540	0.000	**	−15.035	−7.892
URBAN	139	8.410	138	−5.148	0.437	0.000	**	−11.640	−5.180
VIDEO	133	11.692	132	−6.617	0.574	0.000	**	−15.187	−8.196

Table A6: Attention Restoration Measure 1: Change in Digit Span Backwards Score Two-sided unpaired sample t-test comparison of the change in pre-intervention vs post-intervention DSB score by condition. *p $<$ 0.05, **p $<$ 0.005.

										95% Conf. Bounds	
Group 1	Group 2	N1	N2	Mean 1	Mean 2	Cohen's d	t-stat.	DF	p	Signif.	Lower	Upper
NATURE	URBAN	139	139	11.46	8.41	0.151	1.254	275	0.211	ns	−1.739	7.847
NATURE	VIDEO	139	133	11.46	11.69	−0.011	−0.090	269	0.928	ns	−5.207	4.751
NATURE	BREAK	139	132	11.46	12.50	−0.047	0.388	267	0.698	ns	−4.203	6.268
URBAN	VIDEO	139	133	8.41	11.69	−0.166	−1.365	270	0.173	ns	−8.014	1.450
VIDEO	BREAK	133	132	11.69	12.50	−0.038	−0.305	262	0.760	ns	−4.383	5.992

Table A7: Attention Restoration Measure 2: Self -Reported Restoration Two-sided unpaired sample t-test comparison of average self-reported restoration by condition. Attention restoration captured on a 5-point Likert scale. *p $<$ 0.05, **p $<$ 0.005.

										95% Conf. Bounds	
Group 1	Group 2	N1	N2	Mean 1	Mean 2	Cohen's d	t-stat.	DF	p	Signif.	Lower	Upper
NATURE	URBAN	139	139	3.72	3.45	0.276	2.301	276	0.022	*	0.038	0.493
NATURE	VIDEO	139	133	3.72	3.04	0.710	5.854	270	0.000	**	0.452	0.911
NATURE	BREAK	139	132	3.72	3.27	0.493	4.030	269	0.000	**	−0.665	−0.228
URBAN	VIDEO	139	133	3.45	3.04	0.368	3.030	270	0.003	**	0.146	0.686
VIDEO	BREAK	133	132	3.04	3.27	−0.217	−1.766	263	0.079	ns	−0.027	0.497

Table A8: Pro-Environmental Behavior (PEB) Measure 1: Portion of Donations to Conservation Charity Two-sided unpaired sample z-test comparison of the portion of non-zero donations to the nature conservation charity by condition.. *p < 0.05, **p < 0.005.

										95% Conf. Bounds	
Group 1	Group 2	N1	N2	Mean 1	Mean 2	Cohen's h	z-stat.	p	Signif.	Lower	Upper
NATURE	URBAN	139	139	0.75	0.66	0.189	1.580	0.115	ns	−0.020	0.193
NATURE	VIDEO	139	133	0.75	0.71	0.092	0.770	0.463	ns	−0.147	0.064
NATURE	BREAK	139	132	0.75	0.73	0.048	0.390	0.695	ns	−0.126	0.084
URBAN	VIDEO	139	133	0.66	0.71	0.100	−0.800	0.426	ns	−0.065	0.155
VIDEO	BREAK	133	132	0.71	0.73	0.050	0.370	0.711	ns	−0.088	0.129

Table A9: Pro-Environmental Behavior (PEB) Measure 2: Euro Amount Donated to Conservation Charity Two-sided unpaired sample t-test comparison of average donations in Euros made to the nature conservation charity by condition. *p < 0.05, **p < 0.005.

											95% Conf. Bounds	
Group 1	Group 2	N1	N2	Mean 1	Mean 2	Cohen's d	t-stat.	DF	p	Signif.	Lower	Upper
NATURE	URBAN	139	139	2.96	2.38	0.205	1.708	276	0.089	ns	−0.087	1.233
NATURE	VIDEO	139	133	2.96	2.08	0.341	2.809	270	0.005	*	0.262	1.490
NATURE	BREAK	139	132	2.96	2.38	0.206	1.699	269	0.090	ns	−1.233	0.091
URBAN	VIDEO	139	133	2.38	2.08	0.122	1.004	270	0.316	ns	−0.291	0.897
VIDEO	BREAK	133	132	2.08	2.38	−0.124	−1.013	263	0.312	ns	−0.287	0.896

Table A10: Multivariate OLS regression models. The dependent variable is represented by our objective measure of attention restoration (ΔDSB SCORE). Dummy variables BREAK, VIDEO, and URBAN denote participants' allocation to conditions, using NATURE as the reference. EVNIRON. CONCERN averages participant responses to global climate change and biodiversity conservation concerns. Gender is encoded by the FEMALE and NON-BINARY dummy variables (0 for males, 1 for females, and 2 for non-binary individuals). The 'non-binary' gender category, contains only one observation and may be omitted due to perfect collinearity or lack of variation in some models. Categories SMALL CITY, MIXED RURAL & URBAN, and LARGE CITY capture participants' upbringing environments, using RURAL as the reference. HOURS IN NATURE (PER WEEK) quantifies weekly hours participants spend in nature, with $0-4$ as the reference. AGE IN YEARS, ENVIRON. IDENTITY SCALE (EID), YEARS IN INNSBRUCK, and SUBJ. WEATHER denote participant age, nature identity scale average, years residing in Innsbruck, and per-session weather assessments by the researchers respectively. We use cluster-robust standard errors at the session level (31 clusters). Post estimation Wald tests show test statistics (Chi^2). $^{*}p < 0.05$, $^{**}p < 0.005$.

	Model (I)	Model (II)	Model (III)
Condition (Reference: BREAK)			
BREAK	1.032	1.051	0.862
	(2.128)	(2.118)	(2.279)
VIDEO	0.228	0.253	0.191
	(2.481)	(2.463)	(2.379)
URBAN	−3.054	−3.036	−2.112
	(1.821)	(1.813)	(1.881)
Environmental Concern			
EVNIRON. CONCERN		0.113	0.219
		(1.169)	(1.514)
Gender (Reference: FEMALE)			
FEMALE			−1.929
			(2.206)
NON-BINARY			14.333**
			(3.678)
Upbringing (Reference: RURAL)			
MIXED RURAL & URBAN			−0.857
			(2.278)
SMALL CITY			−1.026
			(1.819)
LARGE CITY			−2.971
			(3.034)
Hours in Nature (Reference: $0-4$)			
$5-9$			1.716
			(2.832)
$10-14$			−0.403
			(3.175)
$15-20$			4.594
			(3.827)
>20			5.823
			(3.806)
Other Control Variables			
AGE IN YEARS			0.205
			(0.249)
ENVIRON. IDENTITY SCALE (EID)			−0.412
			(2.424)
SUBJ. WEATHER			0.674
			(0.887)
YEARS IN INNSBRUCK			0.200
			(0.140)
Constant	11.464**	10.938	4.535
	(1.133)	(5.739)	(8.701)
Observations	541	541	541
Prob > F	0.262	0.398	.
R^2	0.006	0.006	0.026
Post Estimation Wald-Tests (F):			
BREAK VS. VIDEO	0.080	0.078	0.051
BREAK VS. URBAN	X 1.560	1.564	0.668

Table A13: Marginal effects logit regression models with a dummy variable (0/1), where 1 indicates that any non-zero amount was donated to any charity. The dependent variable is a binary dummy of whether participants made a donation. Dummy variables BREAK, VIDEO, and URBAN denote participants' allocation to conditions, using NATURE as the reference. EVNIRON. CONCERN averages participant responses to global climate change and biodiversity conservation concerns. Gender is encoded by the FEMALE and NON-BINARY dummy variables (0 for males, 1 for females, and 2 for non-binary individuals). The 'non-binary' gender category, contains only one observation and may be omitted due to perfect collinearity or lack of variation in some models. Categories SMALL CITY, MIXED RURAL & URBAN, and LARGE CITY capture participants' upbringing environments, using RURAL as the reference. HOURS IN NATURE (PER WEEK) quantifies weekly hours participants spend in nature, with $0-4$ as the reference. AGE IN YEARS, ENVIRON. IDENTITY SCALE (EID), YEARS IN INNSBRUCK, and SUBJ. WEATHER denote participant age, nature identity scale average, years residing in Innsbruck, and per-session weather assessments by the researchers respectively. We use cluster-robust standard errors at the session level (31 clusters). Post estimation Wald tests show test statistics (Chi^2). $^*p < 0.05$, $^{**}p < 0.005$.

	Model (I)	Model (II)	Model (III)
Condition (Reference: NATURE)			
BREAK	−0.063	−0.042	−0.028
	(0.051)	(0.051)	(0.054)
VIDEO	−0.001	0.026	0.048
	(0.048)	(0.048)	(0.055)
URBAN	−0.115*	−0.094	−0.078
	(0.052)	(0.052)	(0.056)
Environmental Concern			
EVNIRON. CONCERN		0.116**	0.065**
		(0.023)	(0.021)
Gender (Reference: MALE)			
FEMALE			0.142**
			(0.047)
Upbringing (Reference: RURAL)			
MIXED RURAL & URBAN			0.020
			(0.062)
SMALL CITY			−0.001
			(0.047)
LARGE CITY			0.128**
			(0.044)
Hours in Nature (Reference: $0-4$)			
$5-9$			0.085*
			(0.043)
$10-14$			0.081
			(0.066)
$15-20$			0.027
			(0.084)
>20			−0.094
			(0.102)
Other Control Variables			
AGE IN YEARS			−0.012
			(0.006)
ENVIRON. IDENTITY SCALE (EID)			0.116*
			(0.052)
SUBJ. WEATHER			0.006
			(0.018)
YEARS IN INNSBRUCK			−0.004
			(0.003)
Observations	543	543	542
Prob > Chi^2	0.076	0.000	0.000
Pseudo R^2	0.011	0.050	0.122
Post Estimation Wald-Tests (Chi^2):			
BREAK VS. VIDEO	1.465	1.921	2.476
VIDEO VS. URBAN	4.767*	5.672*	6.129*

Table A11: Pairwise multivariate marginal effects logistic regression models on an indicator for donations made to the nature conservation charity. The dependent variable is a binary dummy of whether participants made a donation. Dummy variables BREAK, VIDEO, and URBAN denote participants' allocation to conditions, using NATURE as the reference. EVNIRON. CONCERN averages participant responses to global climate change and biodiversity conservation concerns. Gender is encoded by the FEMALE dummy variable (1 for females, 0 for males). Categories SMALL CITY, MIXED RURAL & URBAN, and LARGE CITY capture participants' upbringing environments, using RURAL as the reference. HOURS IN NATURE (PER WEEK) quantifies weekly hours participants spend in nature, with $0 - 4$ as the reference. AGE IN YEARS, ENVIRON. IDENTITY SCALE (EID), YEARS IN INNSBRUCK, and SUBJ. WEATHER denote participant age, nature identity scale average, years residing in Innsbruck, and per-session weather assessments by the researchers respectively. We use cluster-robust standard errors at the session level. $^{*}p < 0.05$, $^{**}p < 0.005$.

	BREAK VS. VIDEO	BREAK VS. NATURE	VIDEO VS. NATURE	VIDEO VS. URBAN	NATURE VS. URBAN
1.comp	−0.006	−0.013	−0.021	−0.046	−0.027
	(0.049)	(0.038)	(0.051)	(0.058)	(0.044)
Environmental Concern					
EVNIRON. CONCERN	0.059	0.085*	0.106*	0.098*	0.117**
	(0.039)	(0.043)	(0.040)	(0.037)	(0.033)
Gender (Reference: MALE)					
FEMALE	0.164*	0.144*	0.186*	0.188*	0.180*
	(0.078)	(0.064)	(0.073)	(0.084)	(0.076)
Upbringing (Reference: RURAL)					
MIXED RURAL & URBAN	0.070	−0.024	−0.019	0.122	0.032
	(0.080)	(0.097)	(0.083)	(0.075)	(0.101)
SMALL CITY	−0.059	−0.107	−0.083	0.046	0.015
	(0.065)	(0.098)	(0.080)	(0.066)	(0.089)
LARGE CITY	0.165*	0.102	−0.009	0.133	0.079
	(0.068)	(0.069)	(0.064)	(0.083)	(0.070)
Hours in Nature (Reference: $0 - 4$)					
$5 - 9$	0.079	0.074	0.070	0.088	0.110
	(0.060)	(0.052)	(0.086)	(0.075)	(0.074)
$10 - 14$	0.099	0.085	0.051	0.105	0.103
	(0.104)	(0.096)	(0.136)	(0.117)	(0.121)
$15 - 20$	0.113	−0.044	−0.035	0.087	−0.081
	(0.100)	(0.093)	(0.127)	(0.136)	(0.133)
> 20	−0.133	−0.140	−0.111	0.008	0.018
	(0.107)	(0.128)	(0.132)	(0.158)	(0.154)
Other Control Variables					
AGE IN YEARS	0.000	−0.014	−0.009	−0.005	−0.023*
	(0.008)	(0.011)	(0.008)	(0.011)	(0.010)
ENVIRON. IDENTITY SCALE (EID)	0.135*	0.114	0.067	0.103	0.088
	(0.068)	(0.071)	(0.103)	(0.078)	(0.077)
SUBJ. WEATHER	−0.020	0.004	0.015	0.017	0.042
	(0.020)	(0.024)	(0.025)	(0.031)	(0.026)
YEARS IN INNSBRUCK	−0.008**	−0.008**	−0.005	−0.004	−0.004
	(0.003)	(0.002)	(0.003)	(0.004)	(0.003)
Observations	265	270	271	272	277
Pseudo R^2	0.147	0.130	0.122	0.122	0.129

Table A12: Pairwise, multivariate marginal effects fractional response regression on the portion of total endowment donated to the nature conservation charity. The dependent variable is represented by the fraction of the endowment of EUR 10 donated to the conservation charity. Dummy variables BREAK, VIDEO, and URBAN denote participants' allocation to conditions, using NATURE as the reference. EVNIRON. CONCERN averages participant responses to global climate change and biodiversity conservation concerns. Gender is encoded by the FEMALE and NON-BINARY dummy variables (0 for males, 1 for females, and 2 for non-binary individuals). The 'non-binary' gender category, contains only one observation and may be omitted due to perfect collinearity or lack of variation in some models. Categories SMALL CITY, MIXED RURAL & URBAN, and LARGE CITY capture participants' upbringing environments, using RURAL as the reference. HOURS IN NATURE (PER WEEK) quantifies weekly hours participants spend in nature, with $0-4$ as the reference. AGE IN YEARS, ENVIRON. IDENTITY SCALE (EID), YEARS IN INNSBRUCK, and SUBJ. WEATHER denote participant age, nature identity scale average, years residing in Innsbruck, and per-session weather assessments by the researchers respectively. We use cluster-robust standard errors at the session level $^{*}p < 0.05$, $^{**}p < 0.005$.

	BREAK VS. VIDEO	BREAK VS. NATURE	VIDEO VS. NATURE	VIDEO VS. URBAN	NATURE VS. URBAN
1.comp	−0.030	0.040	0.063*	0.032	−0.016
	(0.026)	(0.034)	(0.026)	(0.028)	(0.034)
Environmental Concern					
EVNIRON. CONCERN	0.065*	0.085*	0.124**	0.092**	0.127**
	(0.031)	(0.038)	(0.028)	(0.019)	(0.023)
Gender (Reference: MALE)					
FEMALE	0.063*	0.094**	0.075*	0.059	0.098*
	(0.031)	(0.032)	(0.029)	(0.044)	(0.048)
Upbringing (Reference: RURAL)					
MIXED RURAL & URBAN	0.049	0.045	−0.000	−0.010	−0.033
	(0.037)	(0.044)	(0.044)	(0.033)	(0.031)
SMALL CITY	0.023	0.009	0.028	0.006	−0.010
	(0.040)	(0.053)	(0.050)	(0.042)	(0.053)
LARGE CITY	0.099	0.084	−0.016	0.025	−0.016
	(0.058)	(0.060)	(0.038)	(0.035)	(0.040)
Hours in Nature (Reference: $0-4$)					
$5-9$	−0.000	−0.028	0.038	0.055	0.037
	(0.070)	(0.065)	(0.026)	(0.040)	(0.034)
$10-14$	0.015	0.022	0.054	0.015	0.024
	(0.060)	(0.079)	(0.057)	(0.039)	(0.060)
$15-20$	0.039	−0.067	0.008	0.035	−0.080
	(0.071)	(0.090)	(0.071)	(0.052)	(0.069)
>20	0.030	−0.081	0.098	0.103	−0.011
	(0.101)	(0.099)	(0.085)	(0.080)	(0.067)
Other Control Variables					
AGE IN YEARS	0.004	−0.001	−0.005	−0.000	−0.007
	(0.007)	(0.008)	(0.005)	(0.005)	(0.007)
ENVIRON. IDENTITY SCALE (EID)	0.068	0.105	0.013	−0.005	0.029
	(0.041)	(0.054)	(0.059)	(0.056)	(0.060)
SUBJ. WEATHER	−0.002	0.003	0.014	0.011	0.023
	(0.011)	(0.012)	(0.008)	(0.015)	(0.014)
YEARS IN INNSBRUCK	−0.005	0.003	0.001	−0.006	0.003
	(0.002)	(0.003)	(0.003)	(0.004)	(0.003)
NON-BINARY		0.195*	0.047		0.187
		(0.098)	(0.087)		(0.097)
Observations	265	271	272	272	278
Pseudo R^2	0.041	0.052	0.047	0.040	0.052

Table A14: Marginal effects fractional regression models with the average fraction of the endowment donated to all three charities. The dependent variable is represented by the fraction of the endowment of EUR 10 donated to the conservation charity. Dummy variables BREAK, VIDEO, and URBAN denote participants' allocation to conditions, using NATURE as the reference. EVNIRON. CONCERN averages participant responses to global climate change and biodiversity conservation concerns. Gender is encoded by the FEMALE and NON-BINARY dummy variables (0 for males, 1 for females, and 2 for non-binary individuals). The 'non-binary' gender category, contains only one observation and may be omitted due to perfect collinearity or lack of variation in some models. Categories SMALL CITY, MIXED RURAL & URBAN, and LARGE CITY capture participants' upbringing environments, using RURAL as the reference. HOURS IN NATURE (PER WEEK) quantifies weekly hours participants spend in nature, with $0-4$ as the reference. AGE IN YEARS, ENVIRON. IDENTITY SCALE (EID), YEARS IN INNSBRUCK, and SUBJ. WEATHER denote participant age, nature identity scale average, years residing in Innsbruck, and per-session weather assessments by the researchers respectively. We use cluster-robust standard errors at the session level (31 clusters). Post estimation Wald tests show test statistics (Chi^2). $^{*}p < 0.05$, $^{**}p < 0.005$.

	Model (I)	Model (II)	Model (III)
Condition (Reference: NATURE)			
BREAK	−0.047	−0.036	−0.031
	(0.028)	(0.027)	(0.029)
VIDEO	−0.055*	−0.041	−0.039
	(0.025)	(0.024)	(0.023)
URBAN	−0.047	−0.036	−0.030
	(0.026)	(0.025)	(0.027)
Environmental Concern			
EVNIRON. CONCERN		0.074**	0.060**
		(0.016)	(0.019)
Gender (Reference: MALE)			
FEMALE			0.062**
			(0.022)
NON-BINARY			0.039
			(0.052)
Upbringing (Reference: RURAL)			
MIXED RURAL & URBAN			−0.003
			(0.021)
SMALL CITY			0.014
			(0.025)
LARGE CITY			0.017
			(0.031)
Hours in Nature (Reference: $0-4$)			
$5-9$			0.028
			(0.033)
$10-14$			0.041
			(0.035)
$15-20$			0.017
			(0.046)
>20			0.023
			(0.045)
Other Control Variables			
AGE IN YEARS			−0.001
			(0.005)
ENVIRON. IDENTITY SCALE (EID)			0.018
			(0.030)
SUBJ. WEATHER			0.006
			(0.008)
YEARS IN INNSBRUCK			−0.000
			(0.001)
Observations	543	543	543
Prob > Chi^2	0.109	0.000	0.000
Pseudo R^2	0.003	0.015	0.024
Post Estimation Wald-Tests (Chi^2):			
BREAK VS. VIDEO	0.106	0.043	0.114
VIDEO VS. URBAN	0.132	0.036	0.188

Table A15: Marginal effects logistic regression models with a dummy variable (0/1), where 1 indicates that any positive amount was donated across the three charities for each of the four conditions. The conservation charity serves as the reference category. Post estimation Wald tests show test statistics (Chi^2). *p < 0.05, **p < 0.005. Clustered standard errors on the subject level in parentheses.

	BREAK	VIDEO	NATURE	URBAN
Charity (Reference: NATURE CONSERVATION)				
SOCIAL	−0.114**	−0.015	0.014	−0.101**
	(0.032)	(0.034)	(0.027)	(0.033)
ARTS	−0.265**	−0.150**	−0.129**	−0.281**
	(0.040)	(0.043)	(0.038)	(0.040)
Observations	396	399	417	417
Nr. of subjects	132	133	139	139
Prob > Chi^2	0.000	0.001	0.000	0.000
Pseudo R^2	0.037	0.015	0.017	0.040
Post Estimation Wald-Tests (Chi^2):				
SOCIAL VS. ARTS	17.282**	10.877**	20.767**	27.574**

Table A16: Marginal effects fractional regression models with the average fraction of the endowment donated across the three charities for each of the four conditions. The conservation charity serves as the reference category. Post estimation Wald tests show test statistics (Chi^2). *p < 0.05, **p < 0.005. Clustered standard errors on the subject level in parentheses.

	BREAK	VIDEO	NATURE	URBAN
Charity (Reference: NATURE CONSERVATION)				
SOCIAL	−0.045**	−0.003	−0.044**	−0.034*
	(0.011)	(0.016)	(0.015)	(0.017)
ARTS	−0.116**	−0.091**	−0.147**	−0.125**
	(0.015)	(0.016)	(0.017)	(0.018)
Observations	396	399	417	417
Nr. of subjects	132	133	139	139
Prob > Chi^2	0.000	0.000	0.000	0.000
Pseudo R^2	0.016	0.014	0.020	0.020
Post Estimation Wald-Tests (Chi^2):				
SOCIAL VS. ARTS	26.087**	31.088**	56.062**	35.243**

Table A17: Paramed Mediation Analyses (BREAK vs. NATURE) on the absolute amount donated to the conservation charity. The controlled direct effect is estimated at a level of zero of the respective mediator in both conditions. The natural direct effect is estimated at the actual levels of the mediators in conditions BREAK and NATURE. Control variables are EVNIRON. CONCERN and ENVIRON. IDENTITY SCALE (EID). Standard errors in parentheses. $^{*}p < 0.05$, $^{**}p < 0.005$.

	Effect: NATURE → PRO-ENVIRONMENTAL BEHAVIOR (PEB)					
	Mediator: NEP		**Mediator**: ΔDSB SCORE		**Mediator**: SUBJ. ATT. REST.	
	Model (I)	Model (II)	Model (III)	Model (IV)	Model (V)	Model (VI)
CONTROLLED DIRECT EFFECT	2.163	1.890	0.348	0.248	−1.126	−0.453
	(3.196)	(3.151)	(0.386)	(0.375)	(1.411)	(1.385)
NATURAL DIRECT EFFECT	0.508	0.407	0.542	0.374	0.267	0.229
	(0.335)	(0.329)	(0.340)	(0.331)	(0.362)	(0.351)
NATURAL INDIRECT EFFECT	0.063	−0.000	−0.004	−0.002	0.304	0.176
	(0.063)	(0.009)	(0.015)	(0.013)	(0.156)	(0.137)
MARGINAL TOTAL EFFECT	0.571	0.407	0.538	0.372	0.571	0.405
	(0.337)	(0.329)	(0.339)	(0.330)	(0.338)	(0.329)
Observations	271	271	271	271	271	271
Control Variables	No	Yes	No	Yes	No	Yes

Table A18: Paramed Mediation Analyses (URBAN vs. NATURE) on the absolute amount donated to the conservation charity. The controlled direct effect is estimated at a level of zero of the respective mediator in both conditions. The natural direct effect is estimated at the actual levels of the mediators in conditions URBAN and NATURE. Control variables are EVNIRON. CONCERN and ENVIRON. IDENTITY SCALE (EID). Standard errors in parentheses. $^{*}p < 0.05$, $^{**}p < 0.005$.

	Effect: NATURE → PRO-ENVIRONMENTAL BEHAVIOR (PEB)					
	Mediator: NEP		**Mediator**: ΔDSB SCORE		**Mediator**: SUBJ. ATT. REST.	
	Model (I)	Model (II)	Model (III)	Model (IV)	Model (V)	Model (VI)
CONTROLLED DIRECT EFFECT	−3.900	−3.395	−0.582	−0.437	1.911	1.383
	(3.158)	(3.133)	(0.376)	(0.367)	(1.404)	(1.379)
NATURAL DIRECT EFFECT	−0.330	−0.301	−0.533	−0.355	−0.569	−0.390
	(0.336)	(0.330)	(0.339)	(0.332)	(0.343)	(0.334)
NATURAL INDIRECT EFFECT	−0.242*	−0.101	−0.024	−0.025	−0.004	−0.012
	(0.114)	(0.070)	(0.043)	(0.041)	(0.056)	(0.052)
MARGINAL TOTAL EFFECT	−0.573	−0.402	−0.558	−0.380	−0.573	−0.402
	(0.336)	(0.329)	(0.337)	(0.330)	(0.338)	(0.330)
Observations	278	278	278	278	278	278
Control Variables	No	Yes	No	Yes	No	Yes

Table A19: Spearman and Pearson correlation matrices with all measured covariates and participant characteristics in conditions NATURE and VIDEO. The top right matrix reports the results of a Spearman correlation analysis between all variables and the bottom left matrix represents the results of a Pearson correlation analysis between all variables. $^{*}p < 0.05$, $^{**}p < 0.005$.

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
(1) DONATION CONSERVATION CHARITY		0.089	0.152*	−0.051	0.126*	0.243**	0.243**	0.024	−0.050	0.235**	0.027	0.041	−0.120*
(2) CONDITION	0.095		0.026	−0.022	0.227**	0.114	0.079	0.056	0.010	0.010	0.003	−0.058	0.006
(3) NEP	0.185**	0.078		0.035	0.098	0.436**	0.187**	−0.127*	0.037	0.410**	0.124*	−0.068	0.051
(4) ΔDSB SCORE	−0.037	−0.027	0.033		−0.086	−0.007	−0.017	−0.040	0.091	−0.091	−0.006	0.001	0.010
(5) SUBJECTIVE RESTORATION	0.150*	0.237**	0.106	−0.061		0.127*	0.006	−0.131*	−0.015	0.172**	0.150*	−0.033	−0.034
(6) EVNIRON. CONCERN	0.249**	0.132*	0.511**	0.004	0.137*		0.100	−0.023	0.098	0.403**	0.083	0.062	0.048
(7) FEMALE	0.211**	0.079	0.223**	−0.027	0.014	0.129*		−0.083	−0.055	0.177**	0.038	0.046	−0.037
(8) UPBRINGING	0.042	0.052	−0.127*	−0.037	−0.101	−0.016	−0.076		0.013	−0.162*	−0.136*	−0.019	−0.063
(9) AGE IN YEARS	0.012	−0.017	0.024	0.018	−0.008	0.026	−0.096	0.034		0.162*	−0.090	0.094	0.525**
(10) ENVIRON. IDENTITY SCALE (EID)	0.230**	0.040	0.464**	−0.058	0.177**	0.433**	0.205**	−0.169*	0.113		0.340**	−0.002	−0.006
(11) HOURS IN NATURE (PER WEEK)	0.015	0.006	0.148*	0.027	0.122*	0.126*	0.036	−0.138*	−0.087	0.342**		0.080	−0.078
(12) SUBJ. WEATHER	0.035	−0.068	−0.053	0.036	−0.026	0.083	0.040	0.013	0.036	0.038	0.064		0.062
(13) YEARS IN INNSBRUCK	0.073	−0.016	0.026	0.021	0.029	0.033	0.037	−0.063	0.280**	−0.025	−0.066	0.067	

Table A20: Paramed Mediation Analyses (VIDEO vs. NATURE) on the absolute amount donated to the conservation charity. The controlled direct effect is estimated at a level of zero of the respective mediator in both conditions. The natural direct effect is estimated at the actual levels of the mediators in conditions VIDEO and NATURE. Control variables are EVNIRON. CONCERN and ENVIRON. IDENTITY SCALE (EID). Standard errors in parentheses. $^{*}p < 0.05$, $^{**}p < 0.005$.

	Effect: NATURE → PRO-ENVIRONMENTAL BEHAVIOR (PEB)	
	Mediator: ΔDSB SCORE	
	Model (I)	Model (II)
CONTROLLED DIRECT EFFECT	0.749*	0.540
	(0.359)	(0.352)
NATURAL DIRECT EFFECT	0.862*	0.643*
	(0.314)	(0.309)
NATURAL INDIRECT EFFECT	−0.001	−0.001
	(0.010)	(0.007)
MARGINAL TOTAL EFFECT	0.861*	0.642*
	(0.314)	(0.309)
Observations	272	272
Control Variables	No	Yes

Table A21: Paramed Mediation Analyses (VIDEO vs. NATURE) on the absolute amount donated to the conservation charity. To properly account for a potential interaction effect between the exposure variable NATURE and our mediator NEP, we estimated a controlled direct effect at a level of zero of the respective mediator, as well as a natural direct effect based on the actual level of the mediators in condition VIDEO, which served as the reference category. Standard errors in parentheses. $^{*}p < 0.05$, $^{**}p < 0.005$.

	Effect: NATURE → PRO-ENVIRONMENTAL BEHAVIOR (PEB)	
	Mediator: NEP	
	Model (I)	Model (II)
CONTROLLED DIRECT EFFECT	0.003	−0.731
	(3.022)	(2.994)
NATURAL DIRECT EFFECT	0.756*	0.637*
	(0.319)	(0.313)
NATURAL INDIRECT EFFECT	0.120	0.017
	(0.088)	(0.047)
MARGINAL TOTAL EFFECT	0.876*	0.654*
	(0.313)	(0.308)
Observations	272	272
Control Variables	No	Yes

Table A22: Multivariate marginal effects fractional response regression on the portion of total endowment donated to the nature conservation charity, with exclusions. 26 individuals were removed from the sample, who did not attain at least 20% of correct responses in the mental math section, in accordance with the pre-registered criteria. The dependent variable is represented by the fraction of the endowment of EUR 10 donated to the conservation charity. Dummy variables BREAK, VIDEO, and URBAN denote participants' allocation to conditions, using NATURE as the reference. EVNIRON. CONCERN averages participant responses to global climate change and biodiversity conservation concerns. Gender is coded by the FEMALE and NON-BINARY dummy variables (0 for males, 1 for females, and 2 for non-binary individuals). The non-binary category contains only one observation and may be omitted due to perfect collinearity or lack of variation in some models. Categories SMALL CITY, MIXED RURAL & URBAN, and LARGE CITY capture participants' upbringing environments, using RURAL as the reference. HOURS IN NATURE (PER WEEK) quantifies weekly hours participants spend in nature, with $0 - 4$ as the reference. AGE IN YEARS, ENVIRON. IDENTITY SCALE (EID), YEARS IN INNSBRUCK, and SUBJ. WEATHER denote participant age, environmental identity scale average, years residing in Innsbruck, and per-session weather assessments by the researchers respectively. We use cluster-robust standard errors at the session level (31 clusters). Post estimation Wald tests show test statistics (Chi^2). $^*p < 0.05$, $^{**}p < 0.005$.

	Model (I)	Model (II)	Model (III)
Condition (Reference: NATURE)			
BREAK	−0.060*	−0.040	−0.039
	(0.031)	(0.033)	(0.029)
VIDEO	−0.086**	−0.063*	−0.061*
	(0.026)	(0.030)	(0.025)
URBAN	−0.064	−0.048	−0.037
	(0.034)	(0.032)	(0.034)
Environmental Concern			
EVNIRON. CONCERN		0.128**	0.103**
		(0.019)	(0.023)
Gender (Reference: MALE)			
FEMALE			0.073**
			(0.026)
NON-BINARY			0.104
			(0.076)
Upbringing (Reference: RURAL)			
MIXED RURAL & URBAN			0.014
			(0.027)
SMALL CITY			0.006
			(0.034)
LARGE CITY			0.054
			(0.039)
Hours in Nature (Reference: $0 - 4$)			
$5 - 9$			0.009
			(0.043)
$10 - 14$			0.014
			(0.048)
$15 - 20$			−0.028
			(0.057)
> 20			0.003
			(0.067)
Other Control Variables			
AGE IN YEARS			−0.003
			(0.006)
ENVIRON. IDENTITY SCALE (EID)			0.058
			(0.038)
SUBJ. WEATHER			0.009
			(0.009)
YEARS IN INNSBRUCK			0.000
			(0.002)
Observations	517	517	517
Prob > Chi^2	0.007	0.000	0.000
Pseudo R^2	0.005	0.032	0.044
Post Estimation Wald-Tests (Chi^2):			
BREAK VS. VIDEO	0.952	0.544	0.591
VIDEO VS. URBAN	0.500	0.243	0.557

Table A23: Multivariate marginal effects logistic regression models on an indicator for donations made to the nature conservation charity, with exclusions. 26 individuals were removed from the sample, who did not attain at least 20% of correct responses in the mental math section, in accordance with the pre-registered criteria. The dependent variable is a binary dummy of whether participants made a donation. Dummy variables BREAK, VIDEO, and URBAN denote participants' allocation to conditions, using NATURE as the reference. EVNIRON. CONCERN averages participant responses to global climate change and biodiversity conservation concerns. Gender is coded by the FEMALE and NON-BINARY dummy variables (0 for males, 1 for females, and 2 for non-binary individuals). The non-binary category contains only one observation and may be omitted due to perfect collinearity or lack of variation in some models. Categories SMALL CITY, MIXED RURAL & URBAN, and LARGE CITY capture participants' upbringing environments, using RURAL as the reference. HOURS IN NATURE (PER WEEK) quantifies weekly hours participants spend in nature, with $0-4$ as the reference. AGE IN YEARS, ENVIRON. IDENTITY SCALE (EID), YEARS IN INNSBRUCK, and SUBJ. WEATHER denote participant age, environmental identity scale average, years residing in Innsbruck, and per-session weather assessments by the researchers respectively. We use cluster-robust standard errors at the session level (31 clusters). Post estimation Wald tests show test statistics (Chi^2). $^*p < 0.05$, $^{**}p < 0.005$.

	Model (I)	Model (II)	Model (III)
Condition (Reference: NATURE)			
BREAK	−0.015	0.014	0.023
	(0.055)	(0.054)	(0.045)
VIDEO	−0.034	0.003	0.020
	(0.056)	(0.054)	(0.053)
URBAN	−0.075	−0.049	−0.027
	(0.056)	(0.056)	(0.055)
Environmental Concern			
EVNIRON. CONCERN		0.152**	0.090**
		(0.025)	(0.026)
Gender (Reference: MALE)			
FEMALE			0.164**
			(0.049)
Upbringing (Reference: RURAL)			
MIXED RURAL & URBAN			0.056
			(0.066)
SMALL CITY			−0.017
			(0.056)
LARGE CITY			0.118*
			(0.052)
Hours in Nature (Reference: $0-4$)			
$5-9$			0.085
			(0.045)
$10-14$			0.087
			(0.081)
$15-20$			0.012
			(0.089)
>20			−0.084
			(0.102)
Other Control Variables			
AGE IN YEARS			−0.010
			(0.007)
ENVIRON. IDENTITY SCALE (EID)			0.128*
			(0.054)
SUBJ. WEATHER			0.010
			(0.020)
YEARS IN INNSBRUCK			−0.006*
			(0.002)
Observations	517	517	516
Prob > Chi^2	0.574	0.000	0.000
Pseudo R^2	0.003	0.053	0.124
Post Estimation Wald-Tests (Chi^2):			
BREAK VS. VIDEO	0.113	0.045	0.002
VIDEO VS. URBAN	0.516	0.865	0.590

D. Instructions of the Experiment and Surveys

D.1. Part 1 General

Disclaimer

Dear participant,

Welcome to today's experiment! Thank you for agreeing to participate in this study.

As part of this experiment, we will ask you to fill out questionnaires and make decisions. You will be financially compensated for your time. Please read the experiment instructions carefully. All statements in the instructions are true. It is essential for the experiment that you are not distracted. That's why we've asked you to surrender your phone for the duration of the study. Also, we request that you do not talk to each other during the study.

We ask that you complete all sections carefully and answer honestly. Information about your final compensation will be provided at the end of the experiment.

By clicking on the "Participate" button, you confirm that you participate voluntarily and accept, surrendering your mobile phone for the duration of the study. Also, you agree that your responses, including basic demographic information, will be stored, but no identifiable personal data will be collected from you. All data will be anonymized and only used for scientific research purposes. Your data will not be shared with third parties.

If you have any questions during the experiment, please raise your hand – the experiment supervisor will answer your questions privately. We kindly ask you not to use any further tools from now on.

Participate

Your IBAN

Please enter your valid IBAN here. Your IBAN starts with a country code, e.g. "AT", "DE", or "IT".

Please repeat the input of your IBAN here.

Next

How important are the following topics to you?

Protection of EU external borders.

Not at all important — Very important

Improving social welfare.

Not at all important — Very important

Ethics in artificial intelligence (AI).

Not at all important — Very important

Ending the COVID-19 pandemic.

Not at all important — Very important

Ending discrimination.

Not at all important — Very important

Resolution of the Russia-Ukraine conflict.

Not at all important — Very important

Reducing political polarization.

Not at all important — Very important

Environmental protection and biodiversity conservation.

Not at all important — Very important

Prevention of global climate change.

Not at all important — Very important

Reduction of economic inequality.

Not at all important — Very important

Next

Instructions for Task 1

On the next page, we will ask you to complete a mathematical task. You will try to solve mathematical equations in your head as best you can. You are not allowed to take notes or use a calculator.

When you click the "Continue" button, the task begins immediately. You have exactly 2 minutes for the task and will be automatically redirected to the next page after this time.

Next

Task 1

Time left to complete this page: **1:31**

Please solve the following mathematical equations as best you can in your head:

7 + 8 =	
13 + 28 =	
67 - 32 =	
74 + 19 =	
35 + 46 =	
63 - 47 =	
57 + 81 =	
23 - 17 =	
24 + 78 =	
13 + 89 =	
91 - 54 =	
26 + 17 =	
76 - 38 =	
45 + 36 =	
98 + 55 =	

Next

Instructions Task 2

On the next page, we will ask you to solve another task. This time you should form as many new words as possible from the letters of a given word in a short time. You do not have to use all the letters, and you can vary the order of the letters as you like, but you may only use letters that are present in the given word. You are not allowed to use the same letter more than once. You are not limited to certain types of words and can ignore upper and lower case.

Example: **"Faces"**
Possible new words: Ace, aces, safe...

When you click the "Continue" button, the task will start immediately and the given word will be displayed. You have exactly 2 minutes for the task and will be automatically redirected to the next page after this time has elapsed.

Next

Task 2

Time left to complete this page: **1:53**

Now please think about what words can be formed from the following word „**Questionnaire**" and write down your ideas in the given text boxes. You have 2 minutes.

Next

Instructions Task 3

On the next page, we will ask you to complete another task. You will be shown a multi-digit number in the middle of the screen inside a **green box** (see figure below). Its digits will **appear on the screen one by one at intervals of one second** and then disappear.

Your task is to **remember the entire number and enter it in reverse order** into the text field provided below the green box and confirm by clicking on '*Confirm Answer*'. You cannot use the keyboard for this, but must use the touchscreen with the green input fields (see figure below).

Example: 6 8 2
Correct answer: 2 8 6

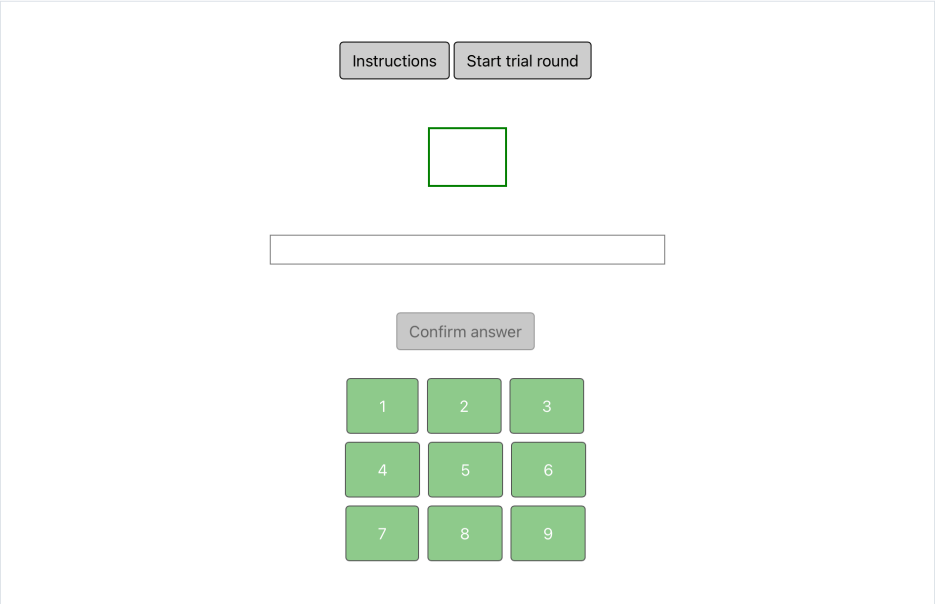
When you click on the "Next" button, the task will not start immediately. You must start each round on your own. Initially, you have a trial round with a three-digit number (click on '*Start trial round*'), where short feedback on your input and the correct solution is displayed. Afterwards you can start the actual task (click on '*Start task*'). From this point on, you will no longer receive any feedback on whether your inputs were correct or incorrect. There are a total of **fourteen rounds plus the trial round at the beginning. There is no time limit**.

The task also begins in the first round with a three-digit number. After every second round the level of difficulty automatically increases by one digit when you start the next round (click on '*Start next round*'). From the third round on, a four-digit number will therefore be displayed, from the fifth round a five-digit number and so on. The subsequent rounds follow the same pattern. In the last two rounds, a nine-digit number will eventually be displayed. **You only have one attempt in each round** to correctly enter the digits via the input fields. Please enter **carefully digit by digit**, because it is **not possible** to **delete** a digit already entered into the field.

Please focus completely on the task and only click on '*Start task*' or '*Start next round*' in each round when you are ready. You can view these instructions again at the beginning and between rounds by clicking on the '*Instructions*' button.

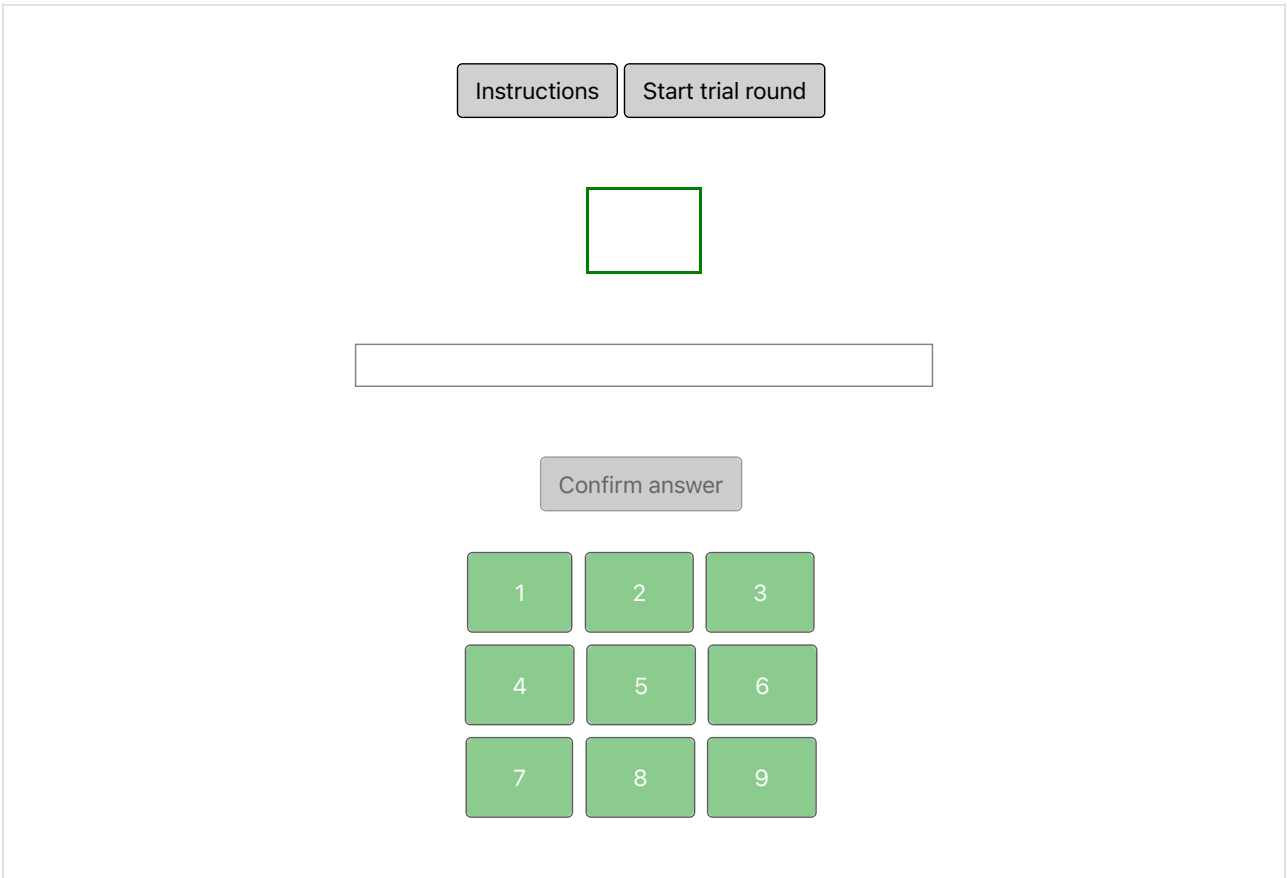
Example of the task screen:

Task 3



Next

Task 3



D.2. Part 2 Intervention: Break

Instructions Part 2

Thank you! You have now completed the first part of the study.

For the second part of the experiment, we ask you now to take a break on the next page. Please stay seated at your place and do not speak to your neighbors. It is **not allowed** to surf the internet or to keep yourself busy with the computer in any other way. The "Next" button will appear automatically after 15 minutes.

○ **I have read and understood the instructions**

Please answer the following questions

How restored do you feel after the break?

○ ○ ○ ○ ○

Not at all restored Very restored

Next

D.3. Part 2 Intervention: Video

Instructions Part 2

Thank you! You have now completed the first part of the study.

For the second part of the experiment, we now ask you to watch a video on the next page. Please use your headphones for this. **Click on the red Youtube button in the middle of the screen to start the video.** The duration of the video is 15 minutes (starts at minute 11:00 and ends at minute 26:00). Please do not change the video segment. **You will be automatically redirected to the next page after the video ends.** Please remove your headphones afterward for the rest of the experiment.

○ **I have read and understood the instructions**

Please answer the following questions

How restored do you feel after the video?

○ ○ ○ ○ ○

Not at all restored Very restored

Next

D.4. Part 2 Intervention: Nature

Instructions Part 2

Thank you! You have now completed the first part of the study.

For the second part of the experiment, we ask you to take a walk through the **Hofgarten**.

The procedure is as follows: Leave your seat individually and quietly, and take a **handout** from the pile at the entrance of the EconLab.

Go to the **main exit** of the SOWI. From there, please go to the Hofgarten and walk around it for about **15 minutes**. This is equivalent to a complete round through the **Hofgarten** on the outermost path.

Please stay **within the park walls**. The walk leads past the pond, along the northern park wall, and down at the rock garden.

For your orientation, we have included a map of the park with the route and some landmarks that you will pass on your walk.

After your walk, go to the **pavilion** in the middle of the Hofgarten, where an assistant will check you off the **list**. Afterwards, go back to the **EconLab to your seat**. At the computer, you will complete the final part of the experiment. All instructions are also printed on your handout. Please put the handout back on the pile at the entrance of the EconLab after your return.

It is important that you perform this activity **alone**. Please do not go in a group and do not talk to each other or to other people you might meet on the way. Please leave handbags or backpacks here so that you can walk comfortably and unencumbered. The lab will be supervised during your absence; your personal belongings are secure.

Please take **your seat ticket** with you and make sure that you sit in the same place upon your return. Otherwise, you lose your compensation for the experiment.

○ **I have read and understood the instructions**

D.5. Handout Nature

Please exit the Social Sciences Faculty (SOWI) via the **main entrance**.

From there, stroll through the "Hofgarten" park for approximately **15 minutes**. It should take you roughly that long to complete a full circuit of the park along the outermost path.

Please remain **within the park walls**. The walk will take you past the pond, along the northern park wall, and down by the rock garden.

For your reference and orientation, we have included a map of the park showing the route as well as some landmarks you will pass along the way.

After your walk, proceed to the **pavilion** in the center of the park, where an assistant will **check you off a list**. Afterwards, please **return to the lab**. You will complete the final part of the experiment on the computer in the lab.

It is important that you complete this activity **alone**. Please do not go in a group and do not talk to each other or anyone else you might meet along the way.

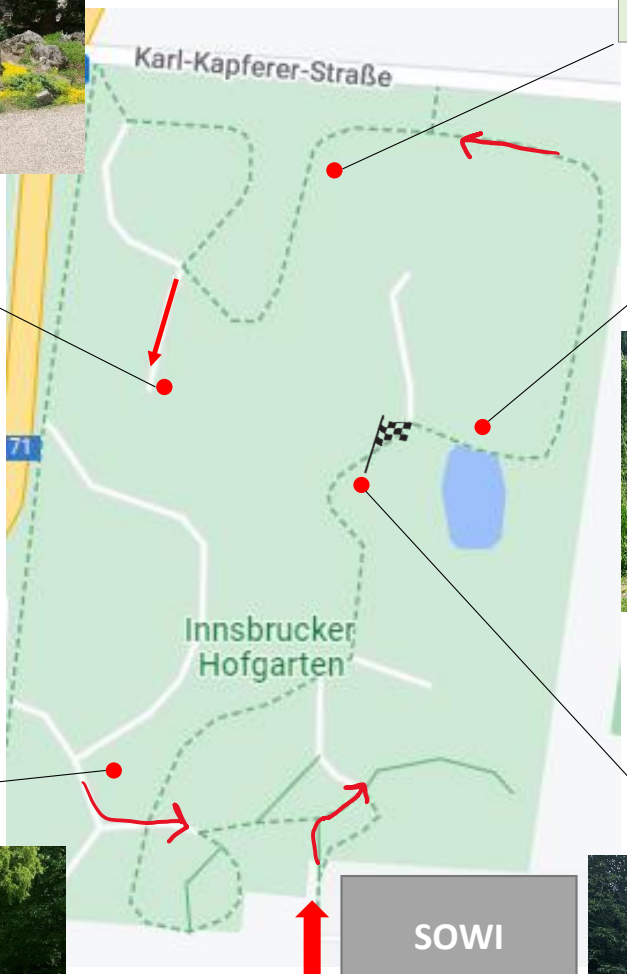
Path from the SOWI to the Hofgarten

Northern Orientation

Detailed map
of the Hofgarten

Palm trees

Stone garden



Pond

Flower
Yin/Yang

Pavillon

SOWI

Entrance via
park gate

Route

Places of interest
along the route

Assistant
meeting point

Please answer the following questions

How restored do you feel after your walk?

Not at all restored — Very restored

How challenging did you find the navigation of the route (from SOWI to the meeting point and back)?

Not challenging at all — Very challenging

How did you find the weather conditions during your walk?

Very unpleasant — Very pleasant

Next

D.6. Part 2 Intervention: Urban

Instructions Part 2

Thank you! You have now completed the first part of the study.

For the second part of the experiment, we ask you to take a walk through the **city**.

The procedure is as follows: Leave your seat quietly and individually and take a **handout** from the pile at the entrance of the EconLab.

Go to the **main exit** of the SOWI. From there, take a walk in the city for about **15 minutes**. We have marked a tour of the **main train station** on this map.

Please stay on the **marked route**. The tour leads over Sillgasse and Museumsstraße to the main train station, and back to SOWI via Meinhardstraße.

For your orientation, we have included a map showing your route and some landmarks you will pass during your walk.

Once you arrive at the main station, an assistant will **check you off the list** and refer you to Brixner Straße. Then, **return to EconLab on your seat via the marked route**. At the PC, you will complete the last part of the experiment. All instructions are also printed on your handout. Please put the handout back on the pile at the entrance of EconLab after your return.

It is important that you **carry out this activity alone**. Please do not go in a group and do not talk to each other or to other people you might meet on the way. Please leave handbags or backpacks here so that you can go comfortably and unencumbered. The lab will be supervised during your absence; your personal belongings are secure.

Please take **your seat card with you** and make sure that you sit in the same place as now after your return. Otherwise, you will lose your compensation for the experiment.

○ **I have read and understood the instructions**

D.7. Handout Urban

Please exit the Social Sciences Faculty (SOWI) via the **main entrance**.

From there, stroll through the city for approximately **15 minutes**. We have marked a circular route via the central train station (HBF) on this map for your convenience.

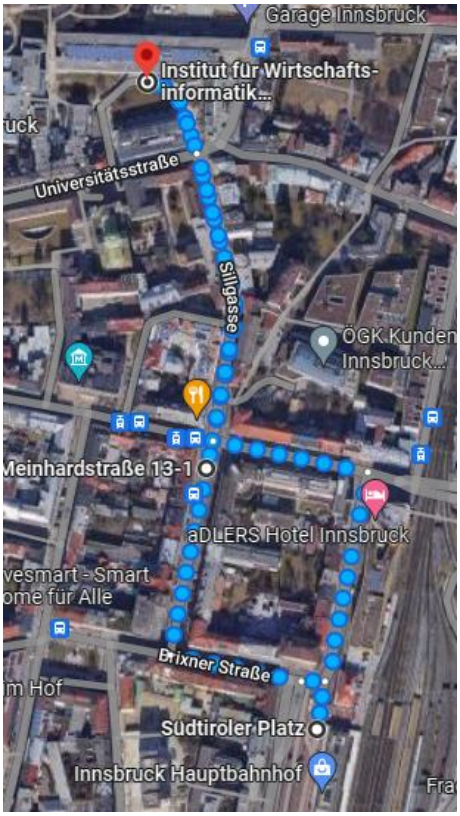
Please remain on the marked route. The walk takes you via the Sillgasse and Museumsstraße to the central train station, and back to the SOWI via the Meinhardstraße.

For your reference and orientation, we have included a map showing the route as well as some landmarks you will pass along the way.

When you arrive at the central station, an assistant will **check you off a list** and direct you to Brixner Straße. Please return to the lab via the marked route. You will complete the final part of the experiment on the computer in the lab.

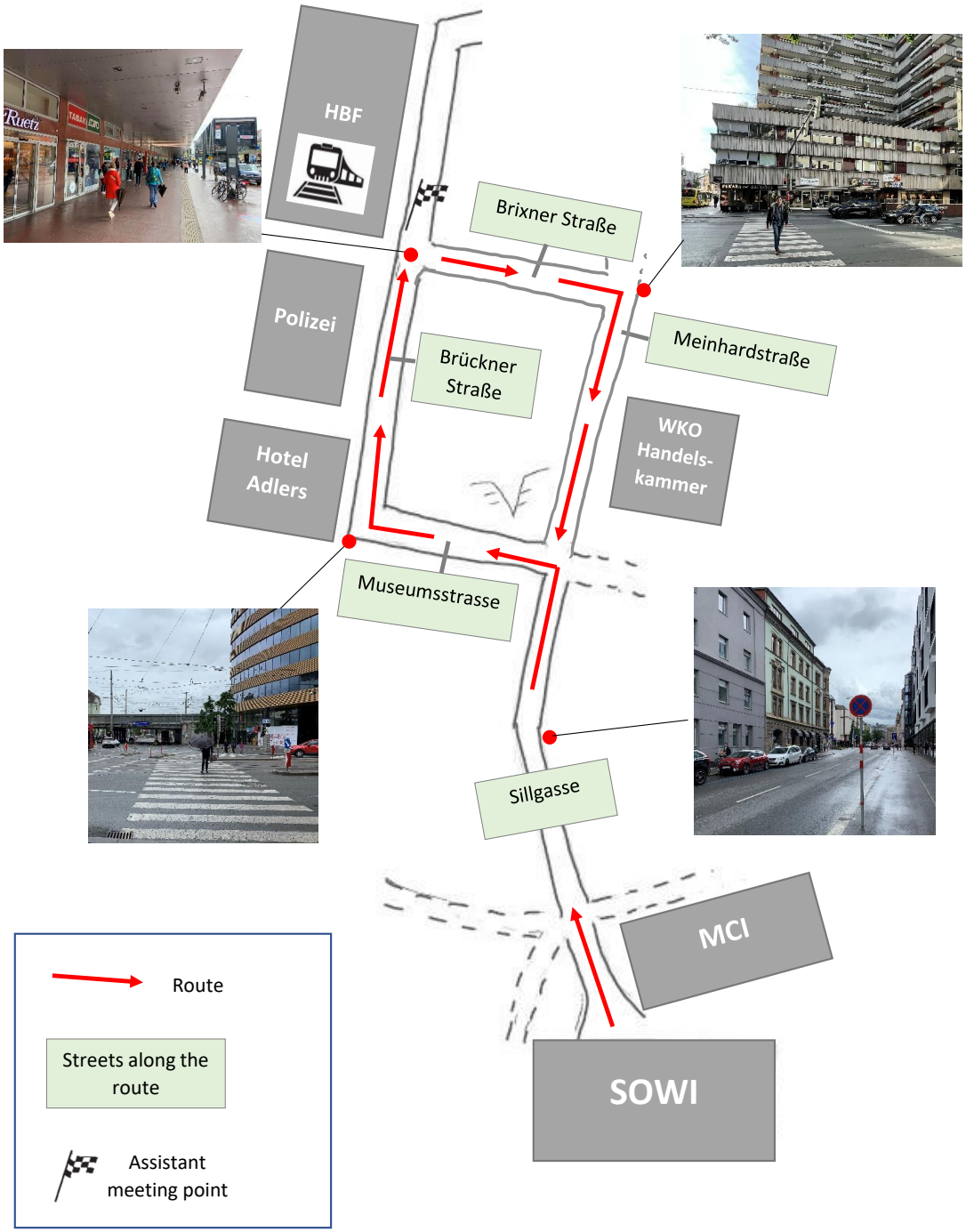
It is important that you complete this activity **alone**. Please do not go in a group and do not talk to each other or anyone else you might meet along the way.

Circular route from the SOWI via the central train station



Northern Orientation

Detailed map of the route (navigation view)



Please answer the following questions

How restored do you feel after your walk?

Not at all restored — Very restored

How challenging did you find the navigation of the route (from SOWI to the meeting point and back)?

Not challenging at all — Very challenging

How did you find the weather conditions during your walk?

Very unpleasant — Very pleasant

Next

D.8. Part 3 General

Part 3

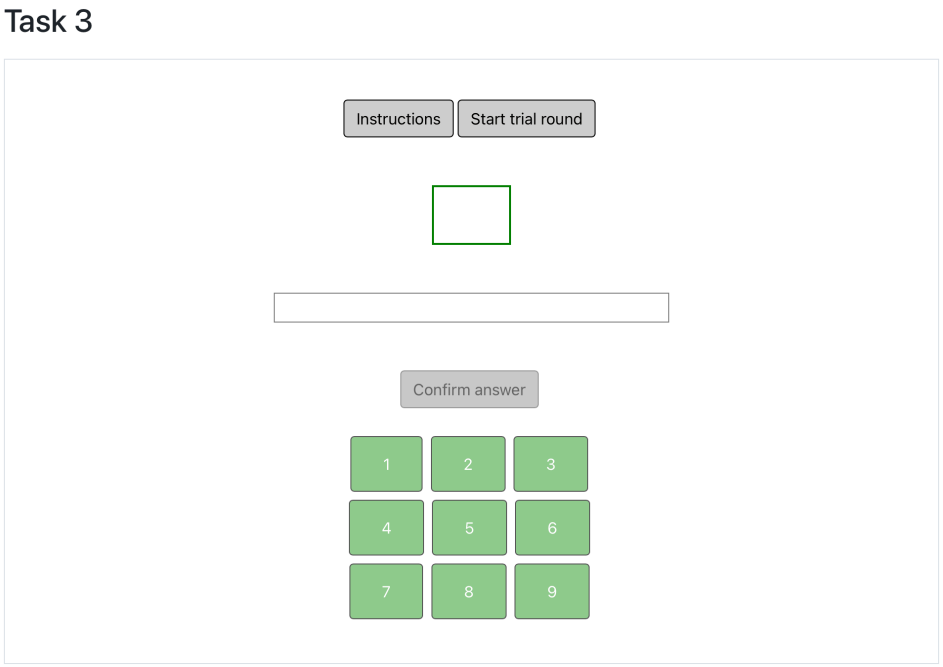
In this third and final part of the study, we would like to ask you to complete two tasks, and then fill out a short survey. This should only take a few minutes.

Next

Repeat Task 3

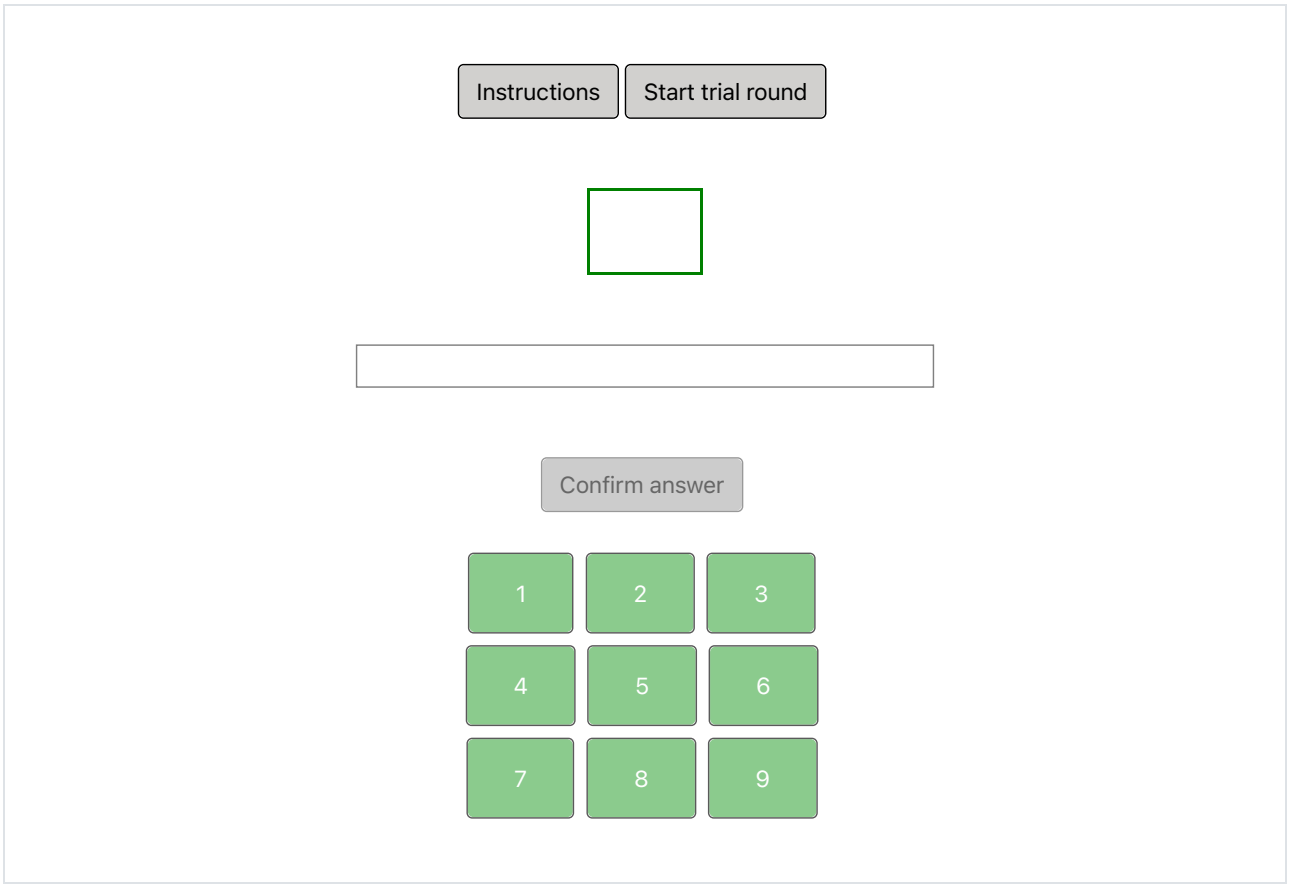
On the next page, we will ask you to complete Task 3 again (see example image). The procedure and the instructions are identical. You can view these instructions again at the beginning and between rounds by clicking on the '*Instructions*' button.

Example of the task screen:



Next

Task 3



Financial Decision

On the next three pages, we will introduce you to **three non-profit organizations** and ask you on **each of the three pages** to make an **independent financial decision** about the organization presented. **Important**: The financial decisions for one organization do not influence the decisions for the other organizations! Your three decisions are completely independent of each other.

You have **for each of these decisions** a bonus amount of **10 Euro** at your disposal. This amount is independent of the fixed basic remuneration of 5 Euro that you will receive for participating in this experiment. You can decide how much of the **10 Euro** you want to keep for yourself or donate to the respective organization. Details on the respective organization and the process will follow on the next pages.

Important: At the end of the experiment, exactly <u>one of these three organizations will be selected at random</u> and your corresponding decision will be implemented! All three organizations and thus all three of your decisions have the same probability of 1/3 of being selected.

Before you can continue with the experiment, we would like to ask you some comprehension questions:

Imagine you have made the following three donation decisions:

Organization A: You donated €10.
Organization B: You donated €8.
Organization C: You donated €3.

At the end of the experiment, **Organization C** was randomly selected. Please answer the following questions about the consequences resulting from the random selection of Organization C. Only when you have answered all the questions correctly can you make your decisions on the next pages.

1. How much in € is donated to Organization C?

2. How much in € do you receive in addition to the basic remuneration of €5?

3. How much in € is donated to Organization A?

4. How much in € is donated to Organization B?

Next

Donation to **Hilfswerk Österreich**

You have an amount of **10 Euros** at your disposal. You can decide how much of these 10 Euros you want to keep for yourself or donate to **Hilfswerk Österreich**.

Hilfswerk is a leading non-profit organization in Austria that supports people, families, and social networks in coping with life's challenges in the areas of health, family, and social matters. Hilfswerk aims to specifically support and promote the concrete quality of life of people in different life phases and various life situations.

You can donate the entire **10 Euros** to Hilfswerk Österreich, keep it all for yourself, or keep a part and donate a part. All participants will receive an official donation receipt for the total amount via email.

Please click on any area of the slider to activate the donation amount setting.

Keep Donate

Confirm Donation Amount

Donation to **Naturschutzbund Österreich**

You have an amount of **10 Euros** at your disposal. You can decide how much of these 10 Euros you want to keep for yourself or donate to the **Naturschutzbund Österreich**.

The Naturschutzbund Österreich has been working for over 110 years in the interest of the general public to ensure the lasting protection of nature as the basis of life for humans, animals, and plants. Its activities extend beyond the borders of Austria, contributing to the conservation of species and habitats and raising awareness about the value of natural and near-natural living spaces.

You can donate the entire **10 Euros** to the Naturschutzbund Österreich, keep it all for yourself, or keep a part and donate a part. All participants will receive an official donation receipt for the total amount via email.

Please click on any area of the slider to activate the donation amount setting.

Keep Donate

Confirm Donation Amount

Donation to **IG Kultur Österreich**

You have an amount of **10 Euros** at your disposal. You can decide how much of these 10 Euros you want to keep for yourself or donate to **IG Kultur Österreich**.

The central task of IG Kultur Österreich is to improve the working conditions for emancipatory cultural work. It serves as a cultural policy interest group and advisory body on behalf of cultural initiatives.

You can donate the entire **10 Euros** to IG Kultur Österreich, keep it all for yourself, or keep a part and donate a part. All participants will receive an official donation receipt for the total amount via email.

Please click on any area of the slider to activate the donation amount setting.

Keep Donate

Confirm Donation Amount

To what extent do you agree or disagree with the following statements?

The Earth is like a spaceship with very limited room and resources.

Strongly disagree | Disagree | Unsure | Agree | Strongly Agree

The Earth has plenty of natural resources if we just learn how to develop them.

Strongly disagree | Disagree | Unsure | Agree | Strongly Agree

Despite our special abilities, humans are still subject to the laws of nature.

Strongly disagree | Disagree | Unsure | Agree | Strongly Agree

Humans are seriously abusing the environment.

Strongly disagree | Disagree | Unsure | Agree | Strongly Agree

When humans interfere with nature, it often produces disastrous consequences.

Strongly disagree | Disagree | Unsure | Agree | Strongly Agree

Plants and animals have as much right as humans to exist.

Strongly disagree | Disagree | Unsure | Agree | Strongly Agree

The so-called ecological crisis facing humankind has been greatly exaggerated.

Strongly disagree | Disagree | Unsure | Agree | Strongly Agree

Humans were meant to rule over the rest of nature.

Strongly disagree | Disagree | Unsure | Agree | Strongly Agree

Humans will eventually learn enough about how nature works to be able to control it.

Strongly disagree | Disagree | Unsure | Agree | Strongly Agree

If things continue as they are, we will soon experience a major environmental catastrophe.

Strongly disagree | Disagree | Unsure | Agree | Strongly Agree

The balance of nature is very delicate and easily upset.

Strongly disagree | Disagree | Unsure | Agree | Strongly Agree

The balance of nature is strong enough to cope with the impacts of modern industrial nations.

Strongly disagree | Disagree | Unsure | Agree | Strongly Agree

We are approaching the limit of the number of people the Earth can support.

Strongly disagree | Disagree | Unsure | Agree | Strongly Agree

Humans have the right to modify the natural environment to suit their needs.

Strongly disagree | Disagree | Unsure | Agree | Strongly Agree

Human ingenuity will ensure that we do not make the Earth unlivable.

Strongly disagree | Disagree | Unsure | Agree | Strongly Agree

Next

Please indicate the extent to which each of the following statements describes you by using the appropriate number from the scale below.

If I could choose, I would prefer to live where I can have a view of the natural environment, such as trees or fields.

Not at all true of me	2	3	4	Completely true of me
○	○	○	○	○

I feel refreshed when I spend time in nature.

Not at all true of me	2	3	4	Completely true of me
○	○	○	○	○

I feel that I have a lot in common with wild animals.

Not at all true of me	2	3	4	Completely true of me
○	○	○	○	○

I feel comfortable out in nature.

Not at all true of me	2	3	4	Completely true of me
○	○	○	○	○

I enjoy encountering elements of nature, like trees or grass, even when I am in a city setting.

Not at all true of me	2	3	4	Completely true of me
○	○	○	○	○

I consider myself a steward of our natural resources.

Not at all true of me	2	3	4	Completely true of me
○	○	○	○	○

I think elements of the natural world are more beautiful than any work of art.

Not at all true of me	2	3	4	Completely true of me
○	○	○	○	○

An important part of my life would be missing if I was not able to get outside and enjoy nature from time to time.

Not at all true of me	2	3	4	Completely true of me
○	○	○	○	○

Learning about the natural world should be part of everyone's upbringing.

Not at all true of me	2	3	4	Completely true of me
○	○	○	○	○

I think of myself as a part of nature, not separate from it.

Not at all true of me	2	3	4	Completely true of me
○	○	○	○	○

Behaving responsibly toward nature -- living a sustainable lifestyle -- is important to who I am.

Not at all true of me	2	3	4	Completely true of me
○	○	○	○	○

I like to spend time outdoors in natural settings (such as woods, mountains, rivers, fields, local parks, lake or beach, or a leafy yard or garden).

Not at all true of me	2	3	4	Completely true of me
○	○	○	○	○

If I had enough resources such as time or money, I would spend some of them to protect the natural environment.

Not at all true of me	2	3	4	Completely true of me
○	○	○	○	○

When I am upset or stressed, I can feel better by spending some time outdoors surrounded by nature.

Not at all true of me	2	3	4	Completely true of me
○	○	○	○	○

Next

Please answer the following questions about yourself

How old are you?

What is your gender?

- Male
- Female
- Non-binary

Where did you grow up?

- Big city
- Small town
- Rural area
- Mixture of city and countryside

How many years have you been living in Innsbruck or the surrounding area?

How many hours per week do you spend on average outdoors in nature?

0-4 | 5-9 | 10-14 | 15-19 | 20 or more

Next

Your Final Payout

*Your decision on the donation has been randomly selected to go to the **IG Kultur Österreich** .*

Your base payment:	€5.00
Your bonus (€10.00 minus your donation amount of €4.40):	€5.60
Your total payout, which will be transferred to you:	**€10.60**

Next

Comments

Do you have any additional comments or anything else you'd like to tell us about this study? (optional)

You can write your comments here:

Next

Thank you for participating!

You can now **quietly** leave the room. Please do not forget your mobile phone. We also kindly ask you to return your seat card to the experimenter at the front and leave your seat in an orderly manner. Thank you!