

Article

Re-Framing Sustainability in a Pandemic. Understanding Sustainability Attitudes, Behaviors, Visions and Responsibilities for a Post-Covid Future

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ABSTRACT

The Covid-19 pandemic has challenged global health and equity and reinforced intergenerational and ecological problems. Future orientation focuses primarily on existing global efforts (Earth Charter, UN Millennium Declaration, SDGs, etc.), however, there is a lack of concepts and empirical studies looking at the potential of a vision of and for the future influencing individual behavior, amplifying moral evaluations of everyday behavior, and allocating responsibility and agency. The pilot study presented assumes that sustainability as a normative framework has the potential to influence social practices on all levels (institutionalized to individual) and was aimed to explore the impact of Covid-related behavior changes on envisioned futures and the willingness to take responsibility for societal transformation processes. The insights gained from a mixed-method survey in Austria (2020, $n = 264$) indicate that people tend to use three narratives for the future, which are related to a certain degree of morality, the perception of being a change agent and the willingness to take responsibility as an individual. This enabled the creation of a typology of individual perceptions of sustainability, ranging from rather fear- or concern-driven resignation (Type A), to guilt-driven resilience (Type B) and to anger-driven but active responsibility (Type C). In the conclusion and outlook, limitations regarding the generalization of the results of the pilot study and future research potential are presented and discussed.

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KEYWORDS: sustainability; sustainability communication; agency; responsibility; Covid-19; future; vision; survey; social practices; climate change; typology

INTRODUCTION

On April the 21st, 2020, at the first peek of the global pandemic, the Guardian [1] started a video series asking for the “new normal” and what people imagine a future shaped by Covid-19 will look like? What are we concerned about? What are we hopeful for? Which of the changes we made so far to our life(style) and behavior will remain? Since then, future institutes, thinkers, and researchers from various disciplines have described Covid-19 as a window of opportunity for sustainability transitions, including for example digitalization of organizations [2], education [3], food consumption [4] or general health related behavior [5]. Therefore, it seems to be consequent to get a better understanding of people’s visions for a post-Covid-Future and, thus, to explore if sustainability is used to frame the future.

There is no doubt that the Covid-19 pandemic means much more than a health challenge and more than a potential economic catastrophe. It is the beginning of a social change process and a test for our civilization on how we deal with transformation. It is also time to ask for the moral principles that will guide this socio-ecological transformation. Our response as society, as collectives and communities, as institutions and individuals will highlight our capability to deal with and manage cultural and social change in the future.

Staying at home and away from travelling, consumption, and playgrounds has changed our behavior and lifestyle, with positive and negative effects. It also changed our attitudes from preferences to moral imperatives, from being driven by conventions and habits to moral convictions and new perceptions of our very individual responsibility in these times of unprecedented challenges in a changing world [6]. During the first year of the pandemic, people did not only return to their closer environment and local structures where they developed a solidary “we-culture” [7] and a new consumer sentiment [8]. But also, organizations picture the future as the opportunity for a new kind of globalization and climate change-related transformation (reduction of fossil fuels, less air and car travel, shift to a meatless diet, some form of basic income, new services provided electronically [9–11]). However, the question arises if those Covid-19 related changes in behavior and attitudes and newly developed moral imperatives are temporary, or if (at least some of them) will be the “new normal” in post-corona times? With the study at hand, we aimed at understanding people’s visions for a “new normal” and what role sustainability as a moral principle might play in this process of redefinition or potential expansion of “normal”.

Therefore, we firstly conceptualize how sustainability is defined and a sustainable future possibly envisioned by organizations and individuals. Secondly, we introduce the concept of moral agency to better understand how individuals perceive their responsibility when it comes to envisioning the future, sustainable development, and social transformation processes, in other words: how much they allocate the responsibility to others,

predominantly governmental institutions and corporates, so how responsibility is distributed [12] and how much this reflects on their own morality [13,14]. With empirical data from a quantitative survey with complementary qualitative elements ($n = 264$; 2020) as first pilot project of a larger study on post-Covid-19-Sustainability Visions [15], we can not only show that people increasingly use sustainability as a principle to evaluate their behavior (“during the Corona-restrictions, but I was also much more sustainable because I didn’t travel”). Also, we can see that this is not necessarily related to the willingness or readiness to change and the commitment to keep the changed and more sustainable practices in the future (taking agency for the future, feeling responsible). After the theoretical background is given, we present the methodology and the findings of this study in detail before offering concluding remarks including a typology of sustainability visions, followed by a discussion of the limitations of this pilot project and giving an outlook for future research.

THEORETICAL BACKGROUND

The 1992 UN Environment Summit in Rio de Janeiro is seen as a milestone aiming at a practical implementation of sustainability, going hand in hand with general great value concerns of the 20th century: peace, freedom, development, and environment [16]. Today, the 17 Sustainable Development Goals (SDGs) and the associated “limits to growth” [17] are often used as an important framework, not only by governments, NGOs, and educational institutions but increasingly also by companies. However, it has been questioned how much they correlate with individual values debated in sustainability studies [16], philosophy, and moral theory [13,18,19]. Only in certain areas (i.e., eating behavior or consumption), research shows that sustainability is related to moralization [20–24], however rather as a stimulus for moralization than a value or attitude itself. Even on an institutional level, it seems not yet to be defined what core values sustainability is related to—or if sustainability is a core value itself with the potential to become a universal value. A brief analysis of the literature on Corporate Sustainability and CSR communication [25,26] shows that organizations are responsible for their environment [27]. However, it is not sufficiently studied how far individual responsibility, beliefs, attitudes, and morality of, for example, a CEO influences and drives the related activities [28]. Similarly, sustainable consumption research is just beginning to understand sustainable consumption practices from an individual and less corporate or marketing focus, and what stimulates them [29–31]. For the paper at hand and based on the authors' previous work [20], we relate sustainable behavior to individual responsibility, which will build the core concept for our study analyzing people’s visions and willingness to act for a post-Covid, sustainable future.

Sustainability as Normative Framework and Moral Compass for Individual Behavior

As mentioned above, sustainability has an overarching normative character, which guides and influences organizational as well as individual behavior. Furthermore, it is used in the assessment and moral evaluation of mainly organizational and systemic action [32]. Here, it includes various normative ideas like the fulfilment of global needs, responsibility for the future, the protection of the environment, and the need for participation in society and societal transformation [33]. Similarly, Covid-19, as a pandemic and threat, stimulates thinking about transformation, new opportunities for social change, and possible suggestions for a post-corona society with an orientation towards sustainability and common welfare, re-regionalization, and a farewell to the paradigm of economic growth [34]. As such, sustainability works as a norm, but not as a rule on how to act. Sustainability is a principle that talks about in which direction and how one can and should think, reflect, and communicate to distinguish the seemingly infinite possibilities of action in their 'preferential' [35]. However, this does not imply that sustainability works as a moral compass or rule for individual behavior as well [20] or that sustainability is a guideline for individual (consumption) practices [36].

As mentioned above, first attempts to break the abstract normative framework of sustainability down and to put it into practice are made in research on sustainable consumption [29,37,38], looking at sustainable consumer practices considering the associated paradoxes [39] and dissonances [20]. Several scandals in recent years, particularly in the food and clothing industry (BSE, factory collapses in Bangladesh) fueled the idea of an alternative of sustainable consumption practices. Non-sustainable ways of production, transportation, and consumption, based on the exploitation of people, animals, and ecosystems, are increasingly criticized in public conversations. Political but also commercial and corporate communication (mainly marketing) today try to stimulate sustainable alternatives and changes in individual attitudes and behavior. However, this implies that the responsibility for sustainable behavior and related practices and choices is "offloaded" on the shoulders of the individual consumers [20,35,40]. Therefore, we see the need to learn more about the relation between sustainable behavior and an increase in (and maybe overload of) individual responsibility.

Self-Moralization, Responsibility, and Agency

In this paper and with the study at hand, we want to mainly focus on the question of individual responsibility which people are able and willing to take for a (more) sustainable future. If people are willing to take responsibility by acting 'more sustainable', then this is what we conceptualize as sustainability agency. Thus, sustainability agency is

related to developing a certain attitude towards a certain issue—here: the post-Covid-19 future or a new or not so new normal. Acting sustainably by recycling, using a keep-cup and a reusable water bottle, growing your own vegetables, avoiding air travel, etc., can either be a preference, a habit, or an attitude. Sustainability brings in morality [22]; however, as soon as morality is recognized, it can gain more morality and develop into a moral imperative, which is then tied with emotions, more intensive and rather independent from regulations.

Therefore, we want to bridge this social-psychological perspective on moralization with a philosophical conceptualization of responsibility. We base this on the assumption that the stronger the moralization of an issue, the more individual responsibility individuals are willing to take, which means the stronger is the ‘moral agency’ (here: sustainability agency) that a person takes on. Responsibility as a relational term is linked to assignment, attribution, and imputation of responsibility [41]. So, there will always be a bearer of responsibility (a person or corporation) which is responsible for something (action, consequences of action, satiation, task) in the view of someone else (addressee, object of responsibility) related to a particular “moral institution” (a judging or sanctioning agent)—in relation to a (prescriptive, normative) framework or principle of action, which is sustainability, as described above.

Role and task responsibility are different from legal responsibility. Lenk [42] points out that “the responsibility for the result of an action is seen only as a superordinate, schematic or ‘formal’ pattern. It still must be connected to the respective domain of values and norms through the concrete or specifications of tasks or roles or through (universal) moral or legal interpretation. Only then can it be filled with meaning or and thus become comprehensible”. At least until the Covid-19-pandemic, sustainability was not always filled with meaning [43]. But recent research shows that Covid-19 and the related restrictions made sustainability possibly more comprehensible [9,44–48]. The pandemic also clearly allocates responsibility to individuals—predominantly for the outcomes of individual actions in an instance for which she or he is accountable (wearing masks, staying at home, getting vaccinated, etc. [49]).

These assumptions are supported by literature on moral agency in change processes, which describes responsibility not as a moment of security or cognitive certainty [50] but as something that comes with the ‘removal of grounds’ and the withdrawal of rules or knowledge on which we usually rely to make our decisions. This is also in line with the social-psychological concept of critical life events and habit-breaking events [51–53].

Therefore, for the study at hand, responsibility is conceptualized as a ‘core dynamic’ in any change process. This suggests that even though responsibility relationships are generally stable, roles of responsibility are fluid (someone is in charge, but it is irrelevant who it is and which role this person holds). Therefore, moral agency exists [54], and sustainability

agency can then be interpreted as normative competence, which involves the individual ability to grasp and apply moral reasoning and to govern one's behavior by the light of such reason [55]. Sustainability agency is always directed towards improving the lives of others [56,57]—in a socio-environmental dimension.

We conceptualize sustainability agency as realized in individual interactions and communications, which can be analyzed with interviews and surveys. Thus, in a pilot project conducted as first step of a study on post-Covid-19 Sustainability Visions, we asked how far people reframe the Covid-19 story as a sustainability story. In other words: how much sustainability agency have people developed in a pandemic, accompanied by many restrictions, forcing people to be more sustainable (no travelling, changes in food & consumption habits, etc.). And: are people willing to keep those changes? Did they develop a role-related, and therefore individual responsibility, which can be described as a sustainable agency with the imperative, factual, and absolute character to maintain a sustainable lifestyle post-Covid?

METHODOLOGY

Design

As part of a two-year project on Post-Covid-19-Sustainability Visions, we conducted a pilot study to explore individual responsibility in a crisis, visions for the future and people's thinking about sustainability. The findings presented in the paper at hand are based on a quantitative online survey with qualitative explorative elements, conducted between June and September 2019 in Austria, after the first wave of the COVID-19 pandemic [58]. The survey was conducted after the first lockdown from March 16th to April 14th, 2020, and a stepwise easing of regulatory constraints in May and June, which saw shops and gastronomy reopening. At the same time, schools were in shift operation, universities doing distance learning, and many people were still working from home [59].

Sample

Compiling a convenience sample by addressing mailing lists in our academic work environment and asking respondents to forward the survey, we followed a snowballing process which led us to a sample of $n = 264$ respondents. While we tried to collect a balanced sample with respect to gender, background, education, and age, the results indicated that 67% of the questionnaires had been answered by women. However, the age distribution varied from 20 to 82 years with a median age of 46 and, given that the addressees of the invitation to participate in the questionnaire came from academia mostly, participants overall indicated a relatively high level of education (tertiary education, BA or higher, 85%).

Survey Instrument

To understand individual behavior, there are many established ways of interviewing people mainly in social psychology or behavior studies [60,61]. The combination of quantitative and qualitative research is also recommended in previous sustainable consumption and sustainability communication research [20,62,63]. Sustainability has an inter- and transdisciplinary character, which requires methodologies to capture individual behavior via descriptive evaluation and individual assessment of the situation. Therefore, in the pilot study described here, the data was collected with an online survey with Qualtrics, with closed questions related to various areas of demographics (gender, age, education, job, income), climate change, psychographics, sustainability communication, changes due to Covid-19 in the categories of food, travel, mobility, retail, waste, and activities. A separate set of partially questions asked for which personal changes towards a more sustainable lifestyle people observed and which of these changes they would like to maintain permanently.

Simultaneously, the situation and context of individual behavior needed to be captured, historical, biographical, and local knowledge is necessary, when social practices should be analyzed [6,63,64]. Thus, the combination of a quantitative survey with open questions maximized as multiple method design for data collection the amount of usable data and the degree of confidence in the validity of the data obtained—even with a relatively small and customized sample ($n = 264$). In particular, the explorative technique applied to analyze the open questions (two-step categorization with QCA map [65,66], provided insights and information on the socio-cultural and socio-psychological background of the respondents. It further enabled us to trace back moral evaluation processes, the allocation of responsibility, the individual perceptions of sustainable practices related to individual situations, and the degree of moralization of certain behavior, which by the end led us to a typology of sustainable agency.

FINDINGS

Overall, the pilot study on post-Covid-19 Sustainability Visions offers deep insights into individual perspectives on sustainability, sustainable behavior, and partially answers the question of how people perceive the Covid-19-pandemic in relation to their future. In the following, we will present the most critical aspects that the study indicates, and which supports a typology of sustainable agency, taking responsibility for a sustainable future.

Climate Change and Covid-19

Firstly, our interest was the individual perception of global issues and crises. When asked for the most important issues facing Austria in the next 20 years, the respondents mention the changing climate (47%), nature and

environment (28%), and social issues (27%) as the most prevalent issues and threats; these were items offered in the closed question.

Related to climate change, people are getting increasingly angry, which can be a catalyst for changes predominantly in the dimensions of mobility and food/eating behavior. The respondents associate urgency (28%), warming (25%), and nature catastrophes (24%) with climate change. 75% state that there are very worried or extremely worried about climate change. Over 90 percent of the respondents confirm that they believe in climate change and think that human activities mainly cause it and that the effects will be rather negative than positive, or entirely negative (88%). Especially female participants feel more and more guilty and angry (see Figure 1) (significant differences; $P \leq 0.024$). Mainly with rising age, the anxiety declines.

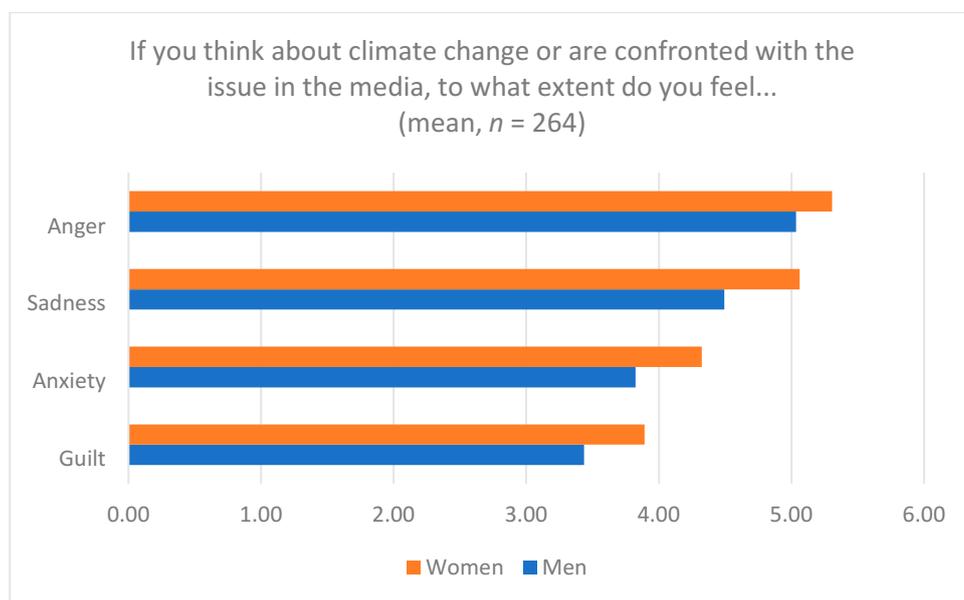


Figure 1. Feelings related to a changing climate, $n = 264$.

These results challenge existing studies focused on eco-anxiety [67,68], which would call for further consideration in future environmental communication research and social psychology. The focus of the study at hand was predominantly on the perception of Covid-19 and the global pandemic related to climate change. For the majority, the “new daily routine” after the first peak of the pandemic in Central Europe and the first lockdown at the beginning of 2020, are seen as “quite positive” in terms of the positive impact on climate change they had. On a scale from 1 (negative) to 7 (positive), the mean was 5, which shows a relatively positive perception. In the complementary open questions in the survey, the Covid-19-related restrictions and limitations in individual mobility and freedom are interpreted as “time to slow down”, as time for gardening and less stress because of less travelling and commuting. Thus, most people were impacted quite a bit, but frame this rather positively in the survey. The participants feel moderately influenced by the pandemic looking back

in five years. Asked for a long-term perspective on the impact of the pandemic, more precisely, asked for the issues that will be challenging for them in the next 20 years, Covid is mentioned just by a few people (3%) and only 3 to 4% want to maintain related regulations, like hygiene measures (masks) or social distancing in their private or work life. The impact of the pandemic in terms of becoming more sustainable was explored in more detail in the second half of the survey.

Covid-Related Changes in Lifestyle and Consumption Practices

“Corona-changes” could be predominantly detected in the areas of mobility, food and eating habits, and shopping and retail. The results of the pilot study indicate that the global pandemic greatly impacted the different areas of consumption, mobility, time-management, and in particular, food choices and waste management. Looking back to the time of restrictions, 50% of the respondents were driving their own car less or much less compared to before the pandemic. Also, car sharing, rental cars, public transport, and long-distance trains were used less. 65% of the survey participants were flying less or much less—mainly due to restrictions, border closures, and lockdowns. Consequently, 37% were cycling more or much more and 53% were running or walking more. Secondly, eating habits and related food choices changed during the pandemic as well—32% were eating increasingly more fresh fruits and vegetables, 63% were eating more homemade or homecooked food, while 56% were eating less or much less fast food, take-aways or supermarket ready-meals. Eating food grown at home is described as one of the major changes due to the pandemic, at least for a third of the respondents. By the same time, people state that they exercised more during the first peak of the pandemic (37% of the participants), but also had more screen-time due to home-office, distance learning, and social contacts, which shifted to online (skype, zoom (virtual meeting rooms, etc.)). In general, 43 percent of the people positively acknowledge that they had more time with family and friends. And thirdly, regarding consumption and retail, clothing and accessories were bought less or much less (64%), especially by women. Also, electronics, sporting equipment, homeware, and appliances were bought less. However, people spent more money on books and music (which was mentioned by 28% of the respondents). While retail shopping was generally decreasing for half of the people we interviewed, 40 % said they used online shopping much more than before Covid. Being at home much more than “normal”, household waste (for 36% of the participants), water consumption (42%), and energy use (52%) were rising over lockdowns and related restrictions. While food waste went down in more of a third of the households the respondents were speaking for.

While these changes describe a more sustainable lifestyle, the question remains if people feel responsible for that—or feel forced in this situation; related to that, we were interested in how far the participants of the survey

“frame” their increasingly sustainable behavior as sustainable and what kind of information or media influences this framing.

Sustainability Awareness and Re-Framing of Individual Behavior

From the respondents' perspective, NGOs (43%) communicate the most about sustainability, followed by media (32%) and science (18%). However, their understanding of sustainability comes from different information sources—mostly important friends and colleagues (for 33% of the respondents (very) important), followed by editorial reporting in newspapers and journals, official websites of political institutions, NGOs, and families. This result confirms findings from existing studies around sustainable consumption [20,39]. Private conversations play a key role in creating meaning and confirming a particular behavior as more or less sustainable. Friends, family, and colleagues are more often mentioned to be important among female than male participants.

However, the key question for this paper was how much the participants are motivated to act more sustainable now and in the future. Here, communication about sustainability by the organizations mentioned above is perceived by 19% as supportive, also sustainability communication in the media is described as having an impact. However, especially related to media information, 15% of the participants are critical towards sustainability communication in public conversations. They consider it exaggerating or manipulative, not alarming enough, or too much opinion driven. Male participants are more critical of the media than women, who find them more supportive (female 24%, male 7%). Accordingly, people who see the media as supportive are more motivated by them than people who are critical of them—which is not necessarily limited to sustainability and climate change related information.

Overall, 14% describe themselves as already living in a sustainable way, where sustainability communication and mainly conversations about different (more sustainable) options fostered this behavior. 7% of the participants are considering further lifestyle changes in the future, 6% want to take more individual responsibility, and 5% want to make very specific contributions and activate other people. However, for another third of the respondents, it needs more than personal change, but rather a change in political structures.

This changes the perspective from individual to organizational and systemic responsibility for change, which we were interested related to the feeling of “agency” when it comes to the vision of a more sustainable future.

Responsibility & Agency—Visions of the Post-Covid-Future

Firstly, it must be mentioned again that the respondents feel generally very motivated by the sustainability-related experiences they made during the pandemic-related restrictions, see Figure 2.

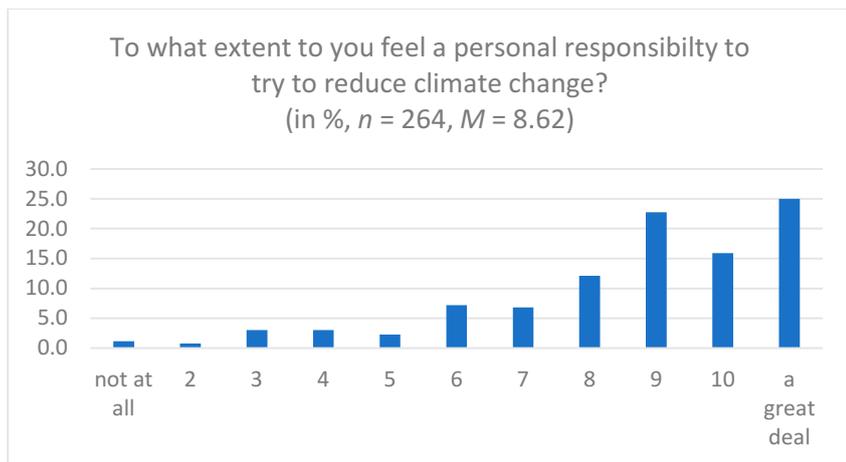


Figure 2. Personal responsibility towards climate change.

As described above, particularly climate-change-related communication in the media inspires them to act more sustainable, and interpersonal conversations with family members, colleagues, and friends even more. Again, mainly female participants in the study feel very responsible for reducing climate change related impacts. However, most of the respondents expresses skepticism; they do not expect many people to decrease for example their energy consumption and permanently change their lifestyles. In addition, respondents consider the possibility rather unlikely that governments in a sufficient number of countries will take action that reduces climate change (Figure 3a,b).

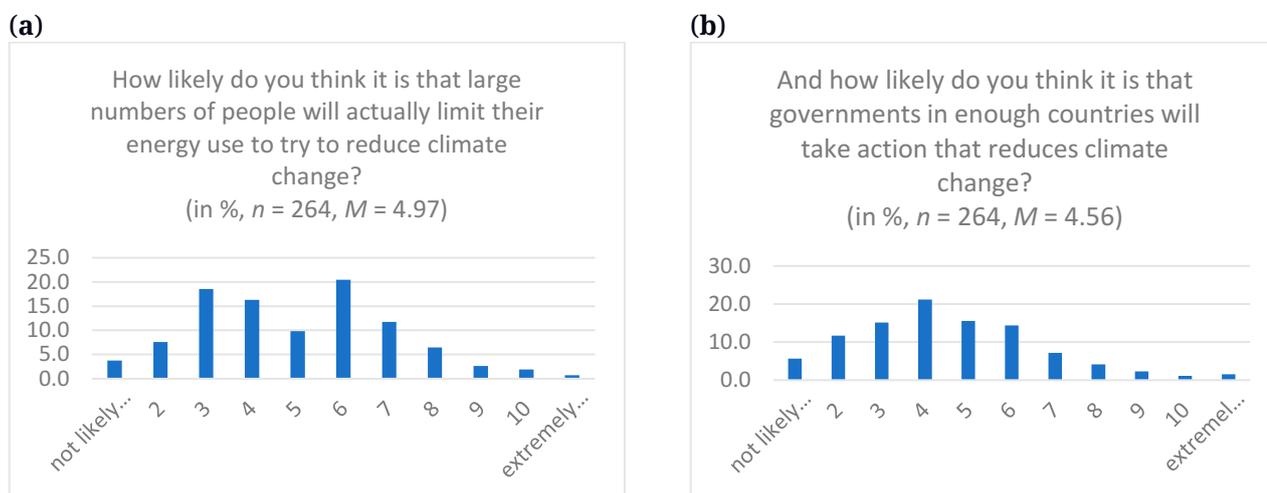


Figure 3. (a) Likelihood of more sustainable behavior. (b) Role of governments in acting against climate change.

However, while governments are seen as less likely to take responsibility and action to face the climate crisis, individual changes in behavior during the pandemic and particularly the lockdown are framed as lifestyle changes and as being more “sustainable”. Also, people label their own behavior as “taking responsibility”. Additionally, the participants of the survey apparently have a vision of how to maintain and

further deepen sustainable lifestyles. For instance, in the related open questions, they mention conscious consumption in general, less plastic, secondhand clothing, no more flights, less usage of their car, and switching to public transport or bike. The respondents also mention the following issues as being important to them to take responsibility (from an individual perspective): Cooking, eating less meat or becoming vegetarian/vegan, doing more sports, being out in nature, more mindfulness, slowing down, focusing on the real important issues. Here again, women are especially interested in consuming less (39% want to maintain this in their private life after the pandemic, compared to only 17% of male respondents). Related to their work life, there were ideas like continuing home office for less commuting, and generally working less or a stronger commitment for paperless offices or similar concepts, which have been briefly mentioned in the literature part of this paper [9].

Overall, the findings of this pilot study indicate that the moralization of individual behavior is strong; people frame their changed behavior in the pandemic as more sustainable and generally more responsible. Also, the respondents feel better and are generally interested in maintaining this “new” behavior. However, not everyone feels capable of taking and carrying the responsibility that partially led to resignation—even if highly moralized (people know what is better for a sustainable future). Mainly those respondents who identify the need for regulations and lockdowns are more in a state of resignation, which resonates with a strong allocation of responsibility to the government and general fear from climate change. While others feel more resilient, which resonates more with anger about misinformation or climate change-related problems, which will be reflected on the conclusion.

CONCLUSION: TYPOLOGY OF POST-COVID-SUSTAINABILITY VISIONS

The findings of the study at hand show not only that people framed their restriction-related behavior during the pandemic as more sustainable. Much more, the psychological consequences of the lockdown increasingly recognized in the literature [44,69] overlap with individual perceptions of the future. Nevertheless, feelings like guilt, fear, or anger about climate change and social problems can be directly related to the allocation of responsibility on an either individual, organizational, or rather systemic level. Here, the pandemic and related restrictions amplify existing feelings and, therefore, they are helpful in creating a typology of post-Covid-19 Sustainability Visions as a conclusion.

The categories used to create the typology for *sustainability agency* are related to specific questions or sets of items. The overarching goal was to differentiate between people who want to go “back to normal”, and those who want to “build back better” (a new normal), and those who are anticipating a real, deep social transformation initiated and driven by the pandemic.

Considering the substantial impact of the pandemic on individual's daily lives and health conditions described in the findings there are pressing social and environmental objectives affecting human well-being and issues of physical and social mobility beyond the pandemic [9]. These topics are also discussed as "Covid-19 response" to each of the Sustainable Development Goals by the United Nations (UN) or in related reports by various institutions and NGOs [70]. While a majority of the participants in our pilot study talk about this broader development as additional burden, for nearly one third the pandemic came just at the right time to "force" society to change, to not substitute but accelerate previous environmental or social concerns on a societal but on an individual level as well [71,72]. Related to that, we can see differences in terms of "post-Covid-anger", "-fear" and "-guilt" perceived by the participants.

Thus, based on the findings presented above, the qualitative analysis of the answers to the open questions [65,66] supports this differentiation between (A) a group of participants who resigns, (B) a group of people that feels more resilient after Covid-19, ready to do something, but still not feeling that they can carry the responsibility by themselves, and (C) a group of people willing to and/or taking on individual responsibility and create change as part of a larger societal transformation, which is further categorized in Table 1.

Table 1. Typology of post-Covid-19-visions and "sustainability agency".

	Type A	Type B	Type C
	RESIGNATION	RESILIENCE	RESPONSIBILITY
Sustainability agency	-	-	√
Responsibility	responsibility is allocated to government, global institutions	collective responsibility	agency, authorship, individual responsibility
Moralization	weak	medium	strong
Sustainability—individual values relationship	conventional, authority dependent	preferences, habits, group dependent, tolerant	concrete, moral imperatives, intolerant
Time relation	short	midterm	long
Space relation	global	nation	community, social context
Social relation	passive	pragmatic	active, critical
Role of the media	strong	medium	weak
Role of family/friends, peers	weak	medium	strong
Future vision	back to normal	new normal	new world
Climate change etc.	fear, concern	guilt, cognitive dissonances	anger, courage
Covid-19	retraction (private)	reactive	active, action, activism

The categories for the typology were created with a two-step categorization process with the software at hand (QCA map); an exception

are the categories Climate change-related feelings (fear, guilt, etc.), which represent one of the open questions, and responsibility allocation, which was part of the quantitative questions as well, as discussed above.

Type A: Resignation

Overall, we discovered three types of post-Covid-Sustainability visions, mainly related to how much individual responsibility they perceive, take—or are at least willing to take. The first group of people was easy to identify as skeptical but restricted in their scope of action. They believe in solidarity, however, know that “the individual can’t do much” (I65; Interview with number as identifier). “I live in a rural area—how can I not drive my car?” (I145). They allocate responsibility to “the system” and/or the government: “it is all depended in the structures that enable or hinder individual actions” (I29). “Facts show that individuals have the least effect”. “I miss the emphasis on political responsibility. If political action is not strongly demanded by media on a large scale, I feel rather helpless that motivated Governments need to act now” (I7), “Capitalism is the crisis” (I7), “Economic growth is the maxime; in a capitalistic world, humankind is never going to use their full innovative potential in terms of environmental protection but will rather be driven too much by financial aspects” (I221). Next to governments, corporations are seen as responsible as well, as mentioned in the first part of the findings above: “I think that there is only so much that people can do individually and until we make corporations accountable for their part, we will not get enough progress towards mitigating the effects of climate change” (I221).

Type B: Resilience

The biggest difference between the first and the second type of post-Covid-visions of a potentially more sustainable future is that for people who became more resilient through the pandemic “every step counts” (I5; I119; I25). They describe social responsibility in a way that “everyone has to contribute to make things better, it has to care all of us—we all have to take care” (I119). “People should be aware of risks and knowledgeable of the effects their daily choices have on the future of the planet” (I25). However, climate change and the pandemic itself are seen as massive challenge and—as mentioned—a responsibility for all of us. Even if they feel more responsible after experiencing changes in lifestyle and consumption during the pandemic, they know that the challenges are too big to be tackled by individuals. “Fighting climate change requires system change, and we as a society have to rethink our priorities” (I5). The answers are more general and universal, lacking specific notions of how (much) individuals can take action. However, the need for change is seen, and the attitude toward change is positive. This is different from the third type, who is driven by anger, active, and takes on individual responsibility.

Type C: Responsibility

A third group of the participants was very clear in terms of their individual responsibility, as outlined above. “We do have a responsibility towards our kids and our grandchildren”, “I can change the world with what I do” (I202). One of the most interesting insights from the analysis of the open questions was that sustainability was more explicitly mentioned by the group of people which we allocated to type C (responsibility): “Sustainability is a matter of initiative, individual initiative” (I202). “Sustainability should never be stimulated by fear” (I88). The participants describe change as something that comes from within, which is stimulated from the insight of every individual; “my own confidence and consciousness of certain challenges and problems stimulates behavior change—and not regulations, rules or a governmental health strategy” (I202). They describe their role as “lighthouse” and inspiration for others; by the same time, the importance of conversations, communication on an interpersonal level and therefore reflections on individual behavior and action are necessary: “we need to reflect more on our individual actions—and this is what Covid forced us to do” (I6).

Overall, the post-Corona visions for the future and a possible new, more sustainable normal and a new world vary related to the degree of individual responsibility the respondents are willing to take. This will be further discussed in the following concluding remarks.

DISCUSSION

The study at hand indicates that the Covid-19 pandemic has a strengthening effect on sustainable practices—at least in Austria where the pilot study took place, and at least after the first peak of the pandemic and related restrictions. With a combination of rather descriptive and rather explorative questions, we were able to identify three types of people related to the degree of responsibility they want to take. This resonates with the theoretical concept we outlined at the beginning of the paper. We developed an idea of “sustainability agency”, which is again related to developing a certain attitude towards a particular issue—here, the post-Covid-19-future or a new normal. We discovered that sustainability works as a moral compass and principle of action in these future visions. Individual behavior (less consumption, less waste, less flying, and commuting) was “moralized”, i.e., was morally evaluated as “doing good” and “being more sustainable” by most of the respondents. However, this does not mean that everyone is able, capable, and willing to develop moral and, therefore, sustainability agency in the future. Only a smaller group (less than a third of the respondents) is emotional and courageous and feels regulation-independent responsibility.

The pandemic had a significant impact on all the respondents—and it made sustainability more tangible, more comprehensible, and applicable—which we assumed. However, we also assumed that Covid-19

has taught us to feel more responsible for our actions—which is not seen by many the survey participants. Only one-third of the respondents describe what we conceptualized as normative competence, which would be the “sustainability agency” we conceptualized in the first part of the paper.

We also asked how much sustainability agency people developed in a pandemic, accompanied by many restrictions, forcing people to be more sustainable (no travelling, changes in food & consumption habits, etc.) and if people are willing to keep those changes? The answer is again: only partially. A certain degree of resignation might be even stronger after another year of the pandemic, which needs to be further explored in consecutive studies.

However, the findings we built our typology on must be further reflected and supported by representative samples and potentially comparative research. This pilot study conducted represents only a snapshot of people’s opinions during a confined period of the pandemic, which has developed into a two-year threat and disruption for people worldwide. Another limitation of the study is that the survey was distributed primarily through academic channels; therefore, the respondents are likely to have an academic background and being already interested in sustainability and climate change issues. The validity of the survey is thus limited, developing sustainable (consumption) practices, and taking and holding “sustainability agency” for and in the future might still be rather part of an intellectual and economic elite [73].

With this paper, we took one important step to further deconstruct sustainability as a wicked problem, blurry, or elite. We offer individual interpretations of sustainability, related action strategies, certain behavior, and existing individual values that can be linked to the principle of sustainability. Furthermore, we connect sustainability as principle of action with individual responsibility and “agency”. We see Covid-19, lockdowns, and related changes in people’s environments as defining and even disruptive moments for more sustainable behavior (growing own food, less mobility & travel, etc.), and, hopefully, with this paper we stimulate more research on how much responsibility people want to take in and for a more sustainable future.

AUTHOR CONTRIBUTIONS

All authors contributed equally to the design and operationalization of the study; while the management of the data was handled by S. Mertl, F. Weder was responsible for the theoretical background and writing, supported by W. Elmenreich, R. Huebner and R. Sposato.

CONFLICTS OF INTEREST

The authors declare that there is no conflict of interest.

REFERENCES

1. The Guardian. A new normal: what do you want a future shaped by Covid-19 to look like? Available from: <https://www.theguardian.com/world/2020/apr/21/a-new-normal-what-do-you-want-a-future-shaped-by-covid-19-to-look-like>. Accessed 2022 Jun 6.
2. Kuzior A, Kettler K, Rąb Ł. Digitalization of Work and Human Resources Processes as a Way to Create a Sustainable and Ethical Organization. *Energies*. 2021;15(1):172.
3. Zhao Y, Watterston J. The changes we need: Education post COVID-19. *J Educ Change*. 2021;22(1):3-12.
4. Eftimov T, Popovski G, Petković M, Seljak BK, Kocev D. COVID-19 pandemic changes the food consumption patterns. *Trends Food Sci Technol*. 2020;104:268-72.
5. Arora T, Grey I. Health behaviour changes during COVID-19 and the potential consequences: A mini-review. *J Health Psychol*. 2020;25(9):1155-63.
6. Weder F, Krainer L, Karmasin M. The sustainability communication reader: A reflective compendium. Wiesbaden (Germany): Springer VS; 2021.
7. Zukunftsinstitut. The corona effect: four different scenarios. Available from: https://www.zukunftsinstitut.de/fileadmin/user_upload/White_Paper-The-Corona-Effect-Zukunftsinstitut.pdf. Accessed 2022 Jun 6.
8. Kittel B, Kritzinger S, Boomgaarden H, Prainsack B, Eberl JM, Kalleitner F, et al. The Austrian Corona Panel Project: monitoring individual and societal dynamics amidst the COVID-19 crisis. *Eur Polit Sci*. 2021;20:318-44.
9. Kuzior A, Mańka-Szulik M, Krawczyk D. Changes in the management of electronic public services in the metropolis during the covid-19 pandemic. *Polish J Manag Stud*. 2021;24(2):261-75.
10. Morarty P, Honnery D. New approaches for ecological and social sustainability in a post-pandemic world. *World*. 2020;1(3):191-204.
11. Goffman E. In the wake of COVID-19, is glocalization our sustainability future? *Sustain Sci Pract Policy*. 2020;16(1):48-52.
12. Ropohl G. Mixed prospects of engineering ethics. *Eur J Eng Educ*. 2002;27(2):149-55.
13. Ingarden R. On Moral Action. In: Tymieniecka AT, editor. *The Human Being in Action*. Dordrecht (Netherlands): Springer; 1978. p. 151-62.
14. Bertolini S. Roman Ingarden: Phenomenology, Responsibility and the Ontological Foundations of Morality. *Misc Anthropol et Sociol*. 2019;20(1):82-97.
15. Weder F, Yarnold J, Mertl S, Hübner R, Elmenreich W, Sposato R. Social Learning of Sustainability in a Pandemic—Changes to Sustainability Understandings, Attitudes, and Behaviors during the Global Pandemic in a Higher Education Setting. *Sustainability*. 2022;14(6):3416.
16. Leiserowitz AA, Fernandez LO. Toward a new consciousness: Values to sustain human and natural communities. *Environ Sci Policy Sustain Dev*. 2008;50(5):62-9.
17. Meadows DL. Reflections on one critique of the limits to growth. Available from: <https://wtf.tw/ref/costanza.pdf#page=422>. Accessed 2022 Jun 6.

18. Jensen T. Moral responsibility and the business and sustainable development assemblage: a Jonasian ethics for the technological age. *Int J Innov Sustain Dev.* 2007;2(1):116-29.
19. Jonas H. Responsibility today: the ethics of an endangered future. *Soc Res.* 1976;43(1):77-97.
20. Weder F, Lemke S, Tungarat A. (Re) storying sustainability: The use of story cubes in narrative inquiries to understand individual perceptions of sustainability. *Sustainability.* 2019;11(19):5264.
21. Feinberg M, Kovacheff C, Teper R, Inbar Y. Understanding the process of moralization: How eating meat becomes a moral issue. *J Pers Soc psychol.* 2019;117(1):50-72.
22. Skitka LJ, Mullen E. The dark side of moral conviction. *Anal Soc Issues Public Policy.* 2002;2(1):35-41.
23. Hofmann W, Wisneski DC, Brandt MJ, Skitka LJ. Morality in everyday life. *Science.* 2014;345(6202):1340-3.
24. Hofmann W, Brandt MJ, Wisneski DC, Rockenbach B, Skitka LJ. Moral punishment in everyday life. *Pers Soc Psychol Bull.* 2018;44(12):1697-711.
25. Rasche A, Morsing M, Moon J. Corporate social responsibility: Strategy, communication, governance. Cambridge (UK): Cambridge University Press; 2017.
26. Diehl S, Karmasin M, Mueller B, Terlutter R, Weder F. Handbook of Integrated CSR Communication. Cham (Switzerland): Springer International Publishing; 2017.
27. Karmasin M, Weder F. [Organisationskommunikation und CSR]. Vienna (Austria): LIT Verlag; 2008. German.
28. Yuan Y, Tian G, Lu LY, Yu Y. CEO ability and corporate social responsibility. *J Bus Ethics.* 2019;157(2):391-411.
29. Balderjahn I, Buerke A, Kirchgeorg M, Peyer M, Seegebarth B, Wiedmann KP. Consciousness for sustainable consumption: Scale development and new insights in the economic dimension of consumers' sustainability. *AMS Rev.* 2013;3(4), 181-92.
30. Geiger SM, Fischer D, Schrader U. Measuring what matters in sustainable consumption: An integrative framework for the selection of relevant behaviors. *Sustain Dev.* 2018;26(1):18-33.
31. Glavi P, Lukman R. Review of sustainability terms and their definitions. *J Clean Prod.* 2007;15(18):1875-85.
32. Weder F. Sustainability as master frame of the future? Potency and limits of sustainability as normative framework in corporate, political and NGO communication. In: Weder F, Krainer L, Karmasin M, editors. *The Sustainability Communication Reader.* Wiesbaden (Germany): Springer VS; 2021. p. 103-19.
33. United Nations. Sustainable Development Goals. Available from: <https://www.undp.org/sustainable-development-goals>. Accessed 2022 Jun 2.
34. Holzinger H. [Post-Corona-Gesellschaft: Was wir aus der Krise lernen sollten]. 1st ed. Vienna (Austria): myMorowa; 2020. German.

35. Grunwald A. [Wovon ist die Zukunftsforschung eine Wissenschaft?]. In: Popp R, Schüll E, editors. *Zukunftsforschung und Zukunftsgestaltung*. Heidelberg (Germany): Springer; 2009. p. 25-35. German.
36. Brand KW. Nachhaltigkeitsperspektiven in der (Post-)Corona Welt. Available from: <https://doi.org/10.17879/sun-2020-2937>. Accessed 2022 Jun 2.
37. Chekima B, Chekima K, Chekima K. Understanding factors underlying actual consumption of organic food: The moderating effect of future orientation. *Food Qual Prefer*. 2019;74:49-58. doi: 10.1016/j.foodqual.2018.12.010
38. Dowd K, Burke KJ. The influence of ethical values and food choice motivations on intentions to purchase sustainably sourced foods. *Appetite*. 2013;69:137-44.
39. Fischer D, Stanzus L, Geiger S, Grossman P, Schrader U. Mindfulness and sustainable consumption: A systematic literature review of research approaches and findings. *J Clean Prod*. 2017;162:544-58.
40. Johnstone ML, Hooper S. Social influence and green consumption behaviour: A need for greater government involvement. *J Mark Manag*. 2016;32(9-10):827-55.
41. Molotokienė E. A Philosophical Analysis of the Concept of Sustainable Development. *Reg Form Dev Stud*. 2020;31(2):148-56.
42. Lenk H. Is individual responsibility enough? *Int J Arts Humanit*. 2020;1(1):3-12.
43. Brønn C, Brønn PS. Sustainability: A wicked problem needing new perspectives. Available from: https://biopen.bi.no/bitstream/handle/11250/2620663/Broenn_2019_Sustainability_AAM.pdf?sequence=4. Accessed 2022 May 31.
44. Blanco E, Baier A, Holzmeister F, Jaber-Lopez T, Struwe N. Long Term Effects of the COVID-19 Pandemic on Social Concerns. *Front Psychol*. 2021;12:743054. doi: 10.3389/fpsyg.2021.743054
45. Perkins KM, Velazquez L, Munguia N. Reflections on Sustainable Consumption in the Context of COVID-19. *Front Sustain*. 2021;2:647542. doi: 10.3389/frsus.2021.647542
46. Barbier EB, Burgess JC. Sustainability and development after COVID-19. *World Dev*. 2020;135:105082. doi: 10.1016/j.worlddev.2020.105082
47. Hakovirta M, Denuwara N. How COVID-19 redefines the concept of sustainability. *Sustainability*. 2020;12(9):3727.
48. Ranjbari M, Esfandabadi ZS, Zanetti MC, Scagnelli SD, Siebers PO, Aghbashlo M, et al. Three pillars of sustainability in the wake of COVID-19: A systematic review and future research agenda for sustainable development. *J Clean Prod*. 2021;297:126660.
49. Meissner HC, Nair N, Plotkin SA. The National Vaccine Injury Compensation Program: striking a balance between individual rights and community benefit. *JAMA*. 2019;321(4):343-4.
50. Keenan JF. What is morality? *Commonweal*. 1997;124(7):22.
51. Sheth J. Impact of Covid-19 on consumer behavior: Will the old habits return or die? *J Bus Res*. 2020;117:280-3.

52. Mazar A, Tomaino G, Carmon Z, Wood W. Habits to Save our Habitat: Using the Psychology of Habits to Promote Sustainability. *Behav Sci Policy*. 2021;7(2):75-89.
53. Dean J. Making habits, breaking habits: How to make changes that stick. London (UK): Oneworld Publications; 2013.
54. Wallace RJ. Responsibility and the moral sentiments. Cambridge (US): Harvard University Press; 1994.
55. Middlemiss L. Reframing individual responsibility for sustainable consumption: lessons from environmental justice and ecological citizenship. *Environ Value*. 2010;19(2):147-67.
56. Droz L. Environmental individual responsibility for accumulated consequences. *J Agric Environ Ethics*. 2020;33(1):111-25.
57. Aaltola E. Affective empathy as core moral agency: Psychopathy, autism and reason revisited. *Philos Explor*. 2014;17(1):76-92.
58. Bamieh O, Ziegler L. How does the Covid-19 crisis affect labor demands? An analysis using job board data from Austria. Available from: <https://deliverypdf.ssrn.com/delivery.php?ID=523068119001022117008103071091089024063014039074069003068121044012025022031114096015122005112021020073003068073106101093098071065082115070123071015020000079122124100028094093017078&EXT=pdf&INDEX=TRUE>. Accessed 2022 Jun 2.
59. Coronakrise: Chronologie der Maßnahmen in Österreich. Available from: <https://www.vienna.at/coronakrise-chronologie-der-massnahmen-in-oesterreich/6866759>. Accessed 2022 Jun 6.
60. Adler JM, Dunlop WL, Fivush R, Lilgendahl JP, Lodi-Smith J, McAdams DP, et al. Research methods for studying narrative identity: A primer. *Soc Psychol Personal Sci*. 2017;8(5):519-27.
61. Steg L, Keizer K, Buunk AP, Rothengatter T. Applied social psychology. Cambridge (UK): Cambridge University Press; 2017.
62. Santana FN, Hammond Wagner C, Berlin Rubin N, Bloomfield LS, Bower ER, Fischer SL, et al. A path forward for qualitative research on sustainability in the COVID-19 pandemic. *Sustain Sci*. 2021;16(3): 1061-7.
63. Keahey J. Sustainable development and participatory action research: a systematic review. *Syst Pract Act Res*. 2021;34(3):291-306.
64. Bryman A. *Social Research Methods*. 5th ed. Oxford (UK): Oxford University Press; 2016.
65. Mayring P. *Qualitative content analysis: a step-by-step guide*. 1st ed. Newbury Park (US): SAGE Publications Ltd; 2021.
66. Mayring P, Fenzl T. [Qualitative inhaltsanalyse]. In Baur N, Blasius J, editors. *Handbuch Methoden der empirischen Sozialforschung*. Wiesbaden (Germany): Springer VS; 2019. p. 633-48. German.
67. Kelly A. Eco-Anxiety at University: Student Experiences and Academic Perspectives on Cultivating Healthy Emotional Responses to the Climate Crisis. Available from: https://digitalcollections.sit.edu/isp_collection/2642. Accessed 2022 May 31.
68. Panu P. Anxiety and the Ecological Crisis: An Analysis of Eco-Anxiety and Climate Anxiety. *Sustainability*. 2020;12(19):7836.

69. Salari N, Hosseini-Far A, Jalali R, Vaisi-Raygani A, Rasoulpoor S, Mohammadi M, et al. Prevalence of stress, anxiety, depression among the general population during the covid-19 pandemic: a systematic review and meta-analysis. *Glob Health*. 2020;16:1-11. doi: 10.1186/s12992-020-00589-w
70. WWF. The Loss of Nature and Rise of Pandemics: Protection Human and Planetary Health. Available from: https://d2ouvy59p0dg6k.cloudfront.net/downloads/the_loss_of_nature_and_rise_of_pandemics_protecting_human_and_planetary_health.pdf. Accessed 2022 June 2.
71. Hodges K, Jackson J. Pandemics and the global environment. *Sci Adv*. 2020;6(28):eabd1325. doi: 10.1126/sciadv.abd1325
72. Barr S, Gilg A, Shaw G. 'Helping People Make Better Choices': Exploring the behaviour change agenda for environmental sustainability. *Appl Geogr*. 2011;31(2):712-20.
73. Naidoo R, Fisher B. Reset sustainable development goals for a pandemic world. *Nature*. 2020;583:198-201. doi: 10.1038/d41586-020-01999-x

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