

Meaning in imagination: A visual narrative study of moral
imagination in Covid-19 related moral dilemmas

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February 2022

Abstract

The atmosphere of instability brought by Covid-19 pandemic has brought about new conflict between contemporary norms and values, leading to novel moral dilemmas with variety of negative consequences. Considering unprecedented moral dilemmas that society is facing at the time of the pandemic, increasing our understating of moral imagination to navigate challenges of Covid-19 could help facing these emergent issues. Moral imagination is considered a constitutive of moral appraisal of novel moral dilemmas (Johnson, 2016). This study aimed to provide phenomenological insights into role of moral imagination by investigating how individuals make sense of novel moral dilemmas brought about by the pandemic. That is, to inquire what individuals define as moral dilemmas in certain Covid-19 related scenarios; what morally acceptable solutions do they imagine for these dilemmas and whether these solutions are based on meaningful underlying themes. In this study, responses of people from four different countries to pandemic related drawings depicting moral dilemmas are investigated inductively using thematic analysis. The theory of morality as cooperation by Curry (2016), which takes an evolutionary game theory approach to defining distinct domains of moral 'elements', has been adopted as a theoretical framework to analyse the results deductively. A diverse range of responses was gathered in the results to create a metaphorical moral landscape for each scenario. The role of moral imagination in moral deliberation was further exemplified by the richness of detail in individual responses to each scenario dilemma. Implications of both inductive and deductive analysis is further discussed in this paper.

Key words: Covid-19, moral imagination, moral dilemma, scenario-based method, thematic analysis, Morality as Cooperation theory, Moral Law theory, Moral sentiments theory

Introduction

The Covid-19 pandemic has been the first global scale pandemic of the 21st century (Johns Hopkins University, 2020), and the first world-wide threat from an infectious disease of recent memory. As such, it has brought about unprecedented social and psychological challenges (Anjum et al., 2020; Dubey et al., 2020). Both societies and individuals have been confronted with novel moral dilemmas on a collective and personal level respectively. Should a person attend the funeral of a loved one and risk spreading the infection, or should they stay at home and sacrifice human connections in times of mourning? Should we adopt policies limiting access to public goods and services to those without a vaccine certificate, potentially limiting the spread of virus but risk alienating a segment of society? These questions are a few among many moral dilemmas that people have confronted during the Covid-19 pandemic. How do people answer these questions? Are there certain ways that people frame these dilemmas in their minds to imagine morally acceptable solutions? Can we observe explicit or implicit themes that orient an individual's choices when trying to tackle these issues?

This paper aims to tackle these questions. That is, to inquire what individuals define as moral dilemmas in certain Covid-19 related scenarios; what morally acceptable solutions do they *imagine* for these dilemmas and whether these solutions are based on meaningful underlying *themes*. In this study, responses of people from four different countries to pandemic related moral dilemmas are investigated inductively using thematic analysis. The theory of morality as cooperation by Curry (2016), which takes an evolutionary game theory approach to defining distinct domains of moral 'elements', has been adopted as a theoretical framework to analyse the results deductively. Future implications of the analysis is discussed at the end.

The role of imagination in addressing novel moral dilemmas

Moral dilemmas are situations in which an agent is confronted with an issue that can be tackled by multiple courses of action. The agent can usually choose each of the actions, but they cannot do all of the actions. Thus the difficulty lies in figuring out the ‘correct’ choice, as often there are no clear rules of precedence that determine a clear ‘right’ or ‘wrong’ choice (Stanford Encyclopedia of Philosophy, 2018). Furthermore, the different choices can potentially conflict with one another depending on the preferred norms and values they are based on. Based on this description, in this study, moral dilemmas are conceptualized as complex moral issues in which one or more courses of action are viewed as the preferred or ‘right’ choice in a given scenario that exhibits conflicting norms and values.

A novel event on the scale of Covid-19 can lead to scenarios with unprecedented moral dilemmas that might occur in the future. The term *anticipatory moral dilemma* is used to refer to scenarios that an agent has not confronted in the past but can be *imagined in the future*. An example case would be a scenario in the near future where one has to choose to support or oppose the adoption of a European wide policy limiting access to public spaces and services to only those with a vaccination certificate. Because the agent has not previously confronted such a moral dilemma directly, their established moral principles and value habits might not be adequate in appraising this new moral issue (Johnson, 2016). Therefore, a “capacity to generate new possibilities for morally good action” (Biss, 2014, p. 8) is needed in order to creatively deal with these kinds of issues. This “capacity” is referred to as *moral imagination*.

Following from John Dewey’s definition of moral deliberation as “a form of problem-solving inquiry by which we transform situations to resolve conflicts” (Johnson, 2016, p. 362), Johnson (2016), further argues for moral imagination as *constitutive* of moral deliberation; the primary way for individuals to assess moral problems and make moral judgements. He views moral imagination as a “process of experiential transformation and

growth” (Johnson, 2016, p. 362) by which an agent can receive insight into the nature of the immediate moral problem; thereby being able to *perceive the possibilities* of new values and meaning in our immediate experiences. This perception is *contextually bound*. Thus, moral imagination can be considered as an embodied ability to come up with creative solutions to address novel moral problems that have not been previously encountered. Referring to the previous scenario, moral imagination enables us to put ourselves in the shoe of a person who is not vaccinated in the times which the vaccination restriction policies that have been implemented; helping us to envision the moral dilemmas that this person could face with an *act of imagination*.

In the western academic circles, the advent of Cartesian dualism (Samuelson, 2007) and the dominance of Kantian rationalist moral philosophy over the past two centuries (Johnson, 2016) has historically led to neglect of moral sentiment theories, in which moral imagination takes centre stage, until the late twentieth century (Johnson, 2016). Consequently, despite calls for acknowledging the importance of cultivating moral imagination for sensible moral deliberation and decision making (Pardales, 2002), moral imagination as a philosophical and psychological construct lacks substantial empirical investigation in morality literature (Samuelson, 2007). The new contextual demands brought about by Covid-19 pandemic has exposed societies to unprecedented conflict of norms and values. As such, many novel moral dilemmas in the day-to-day life of individuals have emerged that if left unaddressed can potentially develop into negative mental health consequences in the form of moral distress (Borges et al., 2020; Mazza et al., 2020). The pandemic provides one of the best opportunities in recent history to study people’s moral deliberation and decision-making during a major emergency. This study aims to promote theoretical understanding of moral imagination by investigating how people make sense of and respond to novel moral dilemmas in the context of Covid 19-pandemic through an act of imagination.

Contemporary marginalization of moral imagination in moral cognition

As noted in the previous section, the mainstream academic view on morality has historically rejected imagination having a major role in morality. According to Johnson (1993), this is due to influence of Kantian logic resulting in the dominance of what he calls Moral Law Folk theory. From this theoretical perspective, morality is defined as set of *rational principles* that can be *universally* applied to any moral dilemma regardless of contextual factors. These principals are considered *codified* literal concepts that determine what one ought and ought not to do. They are derived from a transcendent source, for example theological source – e.g., commandments from God – or rationalist source – e.g. knowledge from Kantian noumenal ego –. In order to avoid moral relativism, moral law theories forgo reliance on empirical evidence *grounded* in *bodily* and *affective* states (Johnson, 2016). Thus, this perspective of morality as a *system of rationally derived moral laws* denies moral imagination any form of constitutive role in moral deliberation and appraisal on the basis that imagination and reason should be considered fundamentally separate cognitive *faculties*.

In present times, this ‘cognitive faculty’ view of morality can be observed to propagate in cognitive sciences primarily through the proponents of evolutionary theory (Haidt, 2007; Prinz, 2007; Shackelford & Hansen, 2016). A common axiom in this body of work is that the central function of morality in human species is to promote cooperation (Greene, 2015; Tomasello & Vaish, 2013). A relatively recent and comprehensive theoretical attempt at this line of reasoning that has gained momentum in literature is the Morality as Cooperation Theory (MCT) (Curry, 2016). MCT defines morality as “a collection of biological and cultural solutions to the problems of cooperation recurrent in human social life” (Curry, 2016 p. 29). By taking evolutionary game theory as its foundational theoretical framework, MCT argues that since humans have spent most of their existence as primate species living in intense hunter-gatherer social groups, they “faced (and continue to face) a range of different

problems of cooperation – that is, mutually-beneficial, win-win, nonzero sum social interaction” (Curry et al., 2021, p. 2). Curry et al. (2021) perceives the range of solutions – be it instincts and intuitions derived from nature or institutions and inventions derived from nurture – to these cooperation problems as “mechanisms” that provide the criteria by which individuals judge each other’s behaviour. It thus views morality as a label that “philosophers and others” have given to these cooperative solutions. By the way of analogy, Curry et al. (2021) postulates that just as there are currently seven main types of cooperation identified in evolutionary game theory, there are seven categorically distinct cooperative solutions that can be called fundamental moral ‘types’ or *domains*. These are: *family values, group loyalty, reciprocity, heroism, deference, fairness* and *property rights*. Table 1 (Curry et al., 2021, p. 3) provides an overview of the seven ‘elements’, the basic idea behind each, its corresponding game theory concept and virtues associated with the specific ‘element’.

Table 1 Seven moral elements

Cooperation	Morality	Basic idea	Virtues
1 Kinship	Family Values	give your family special treatment	Duty of care, special obligations to kin
2 Mutualism	Group Loyalty	work together rather than work alone	Loyalty, unity, solidarity, conformity
3 Exchange	Reciprocity	return favours and injuries	Reciprocity, trustworthiness, forgiveness
4 Hawk	Heroism	display your power	Bravery, fortitude, largesse
5 Dove	Deference	submit to your superiors	Respect, humility, awe, reverence
6 Division	Fairness	divide disputed resources	Fairness, impartiality, equality
7 Possession	Property Rights	respect first possession	Respect for property, property rights

Note. adapted from (Curry et al., 2021, p. 2)

Furthermore, by using the Periodic Table of Elements or letters of the alphabet as a metaphor, the author postulates a “Periodic Table of Ethics” (Curry, 2016) by viewing the above moral domains as fundamental moral ‘elements’ or ‘letters’ that when combined can produce more complex moral ‘molecules’ (Curry et al., 2021) that constitute what is

conventionally regarded as moral virtues. The authors then hypothesised definition of candidate moral ‘molecules’ and proceeds to seek concepts that corresponded with their theoretical expectations in contemporary literature as ‘evidence’ for validity of their molecule concepts. As an example, the authors defined *filial piety* as combination of *deference* and family values; in other words ‘you must respect your superiors’ plus ‘you have special duty towards you family’ equals ‘you must specially respect the senior members of the family like your parents’ (Curry et al., 2021). This conception of filial piety as the authors have noted is more or less comparable in the literature with consensus accounts of Confucian ethics (Jordan, 1998). Similarly, the authors hypothesize many higher order virtue ‘molecules’ depending on the combinatorial configuration of the basic ‘elements’. Curry et al. (2021) intends to show that using such a combinatorial system enables a principled and systematic framework “to analyse, organise and explain” taxonomies of morality that would “contain all morals, possible and actual”. In this deductive manner, Curry (2007) claims this theory helps in reconciling group of virtues that are historically considered to be incompatible; such as ones belonging to heroism (strength and courage) with deference virtues (humility and reverence). Thus, the authors hope to present a “grand unified theory of morality” (Curry, Mullins, et al., 2019) that would place the study of morality on a *supposed* “firm scientific footing” (Curry et al., 2021, p. 15).

Judging by the above description, it is not too much of a stretch to interpret Morality as Cooperation Theory as one of many contemporary versions of Moral Law Folk theory; in which biology in the form of an ‘innate moral faculty’ propelled by genes has replaced the traditional theological argumentation as the transcendental source of universal moral principles. Although Curry (2016) does not explicitly take a philosophical stance, there is nevertheless an implicit reductive naturalism in the argumentation due to evolutionary theory being the axiomatic framework of his theory (Sterelny & Fraser, 2017). Even though ‘biologis-ing’ morality has precedence in evolutionary circles and is often celebrated (Haidt,

2013a), careful scepticism of this stance is recommended on the account of historical blunders such as emergence of Eugenics Ethics out of the need to find a biological source of good and evil (Prinz, 2007).

Evidently, the theory has garnered some criticism. With only a limited set of content analysis from ethnographic literature (Curry, Mullins, et al., 2019), and self-report measure of moral values (Curry et al., 2019) the authors have been criticized for lack of significant empirical evidence for the theory. Second, the exact relation between moral ‘elements’ and moral ‘molecules’ have been called into question as well. Third, peers question whether MCT can be view as specifically a psychological theory, citing lack of description for any “proximate mechanisms through which we can have moral judgments” (Bloom, 2019; as cited in Curry, Mullins, et al., 2019).

It should be noted that the authors themselves acknowledge the criticism brought up by peers (Curry, Mullins, et al., 2019), and encourage open discussion of the theory’s implications. One way that has been proposed to falsify the theory is to identify parts of morality that have nothing to do with cooperation. With the advent of the pandemic, an opportunity arises to investigate the claims of the theory in new moral dilemmas and to see whether individuals deliberate via moral ‘elements’ hypothesized by Morality as Cooperation Theory.

Study objective

Taking this atmosphere of instability as backdrop, the Covid-19 pandemic has spawned new situations ripe for conflict between contemporary norms and values, leading to novel moral dilemmas with unprecedented consequences for mental health (Borges et al., 2020; Hossain et al., 2020; Mazza et al., 2020). Therefore, studying these emerging moral dilemmas in the context of this pandemic can be beneficial to envisioning a morality that is rooted in a human-centred, global view to enhance the well-being of people across cultures and nations (Patel & Phillips, 2021).

This study aims to provide critical theoretical insights into the role of moral imagination by investigating how individuals make sense of novel moral dilemmas brought about by the pandemic. Studying these emerging moral dilemmas in the context of this pandemic can be beneficial to envisioning a morality that is rooted in a human-centred, global view to enhance the well-being of people across cultures and nations (Patel & Phillips, 2021). Surveying the moral imagination literature Samuelson (2007) proposes that since imaginative moral cultivation is seen through an act of narrative engagement, one of the best empirical methods to study moral imagination is via open-ended narrative moral dilemmas. Therefore, this study will utilize a visual narrative approach to address the following research question:

- What characterizes imaginative deliberative problem solving in individuals who face anticipatory moral dilemmas in Covid-19 related scenarios?

The above question will be broken down into the following sub questions in order to answer the main research question systematically:

1. What *moral issues* do individuals identify when confronted with narrative drawings depicting anticipatory moral dilemmas in the context of Covid-19 pandemic?
2. What *acceptable moral solutions* to these individuals imagine for the identified moral issues?
3. What *action options* individuals chose for themselves as morally acceptable course of action?
4. What underlying *themes* can be interpreted from the actions options across dilemmas?

Furthermore, this paper intends to use this opportunity to empirically investigate the claims of Morality as Cooperation Theory by answering the following questions:

1. Do the identified themes have categorical correspondence with the moral 'elements' of MCT?
2. Are all identified moral issues and themes oriented around problems of cooperation?

Method

Background

This study analyses data collected from the post-corona futures project organized by the Story Lab from faculty of Behavioural, Management and Social Sciences of the University of Twente (Twente University, 2021b). The project entailed three studies that investigated how people will deal with the challenges of a post Covid-19 world through a narrative lens. The third study from this project which was called ‘Anticipatory Moral Imagination in Corona Times: A Study Based on Drawings’ will be the focus of this paper; as the existing data set of the third study is the focus of a secondary analysis for this paper. The third study was approved by the Ethics Committee of the Faculty of Behavioural, Management and Social Sciences (BMS) of the University of Twente (request no. 201031).

Participants

Convenience sampling was utilized to select participants from the social network of the researchers. The original study was an international comparative study. To allow for drop-out rates due to the intensity of study design, all participants of previous two studies from four countries with the largest numbers of participants in the total sample were invited to the third study. In total, 83 individuals were invited to participate in the study. Only 34 individuals accepted the invitation. Participants from Ecuador (N = 9), the Netherlands (N = 6), Finland (N = 6) and Greece (N = 13) took part in the study. To be eligible for the study, participants had to be 16 years or older, be citizen of the countries mentioned above and possess understanding of a language used in this study (English or the official language of the above countries). Participant age ranged from 17 to 77. More than half of the participants possessed a university degree. Participants were provided a compensation of 60 euros for taking part in the study, 15 euros for each of the four measurement points.

Procedure

The third study used a cross-sectional online survey design. Conducted from September to November 2020, it contained four measurement points in the form of online surveys via Qualtrics, an online survey software. Informed consent form was collected online. In each of the four surveys, two drawings were displayed to participants as a set. Each set contained a personal moral dilemma and a collective (policy) dilemma. In total, eight drawings were shown to participants in the original study and the responses to all eight constitute the original data corpus. Out of the responses to these eight drawings, the data set of four drawings focused on personal moral dilemma (Figure 1-4) was selected for analysis in this study.

Materials

The moral dilemmas were presented by eight drawings which were created in collaboration with the artist Judith Schepers (Twente University, 2021a). The inspiration for this idea comes from the Thematic Appreciation Test (TAT), which considers interpretation of drawings and pictures a certain way to reflect the individual's imagined experience (Cramer, 1999). These drawings depict scenarios with potential moral dilemmas during the Covid pandemic, ranging from familiar, present situations to futuristic scenarios and least familiar circumstances. Drawings are purposefully rich and ambiguous to allow participants to draw up their own story of what could be the moral problem in each situation and to imagine what solutions to these problems they can come up with. The idea behind the use of drawings is for participants to interpret the content through a narrative lens, stimulating imagination regarding emergent and future moral issues in everyday life. The scenarios showcased in these drawings were chosen based on preliminary outcomes of the first study in this project, and common topics and themes prevalent in media at the first half of 2020.

In the online surveys where these dilemmas were displayed, participants were asked a set of four to five open-ended questions per drawing (Appendix). The first question invited

the participants to provide their own open-ended interpretation of the scenario, allowing them to make sense of what is depicted and whether they will identify any moral dilemmas in the situation. Each of the following four questions dealt with an aspect of moral imagination. Question two being centred around moral sensitivity. The third question was concerned with possible courses of moral action. The final two questions were concerned with how the participant would imagine themselves behaving in the scenario and what morally acceptable course of action they themselves would choose. The five questions used in the first scenario are provided as an example:

1. Could you describe what is happening in the picture? What is the situation? Who are the characters? What do they do, feel or think?
2. What are the moral dilemmas you think the characters are facing in this picture? Try to make explicit as many moral dilemmas as you can.
3. Given the moral dilemmas you've identified, what should the characters do in this situation? Try to imagine as many morally acceptable options as you can.
4. Suppose you were to attend a funeral during the coronavirus crisis, what do you think you should do? Please make explicit the reasons for your choice.
5. Suppose you were either a very close family member of the deceased person or a mere acquaintance, what do you think you should do then? Please make explicit the reasons for your choice.

Analysis

In this study, a qualitative thematic analysis (Braun & Clarke, 2006) was conducted, using both an inductive and deductive approach to search across the data set to elucidate repeated patterns of meaning. From the inductive approach, the researcher went through each data item; that is the translated transcript of each of the 34 respondents. Starting from the first scenario, the responses to survey question one and two were examined for meaningful data extracts that relate to what moral problems respondents identified in that particular scenario.

Extracts to survey question three were considered for what acceptable solutions were imagined to tackle these problems. These extracts were then manually organized into a table and further analysed for potential codes; that is labels and key words that captured a specific segment of the data item that is interesting in regards to the research question. To come up with the coding scheme, a semantic approach was chosen, opting for a descriptive account of the data extracts. This process was repeated for each scenarios to identify a number of salient codes, hence providing a narrative ‘moral landscape’ per scenario at the semantic ‘level’.

During the analysis, there were some challenges with coding responses. On a few occasions, the responses drifted off into the respondent’s personal views on the Covid pandemic and current prevalent societal issues that were not directly related to the scenario or the question. For example, in response to question two for scenario two, that is what moral problems can be identified in the drawing, a respondent replied by only stating “People can be out and about again, but they do not know what these people experienced in the Corona time”. In such cases, parts of the responses were considered unrelated to the research question and thus were excluded from the analysis. Additionally, due to translation errors, it was challenging to code some of the responses.

It is important to note that for each scenario, respondents identified more than one moral dilemma. However, due to limited scope of this study the most prevalent moral problem was chosen as basis to further analyse responses to survey question four and five. These questions concerned respondents’ own imagined action and behaviour in the scenario drawing. Here too the data extracts were coded at the descriptive semantic ‘level’. These were then summarized *within a scenario* to interpret latent ‘underlying features’ called *sentiments*. Afterwards, similar sentiments across scenarios were clustered together to create themes; that is a common, recurring pattern across the scenarios that is oriented around a central idea or concept. At first, a total of nine candidate themes were created across the dilemmas. To check for internal homogeneity and external heterogeneity, these preliminary themes were then

compared to individual data extracts to find potential inconsistencies. Some themes were then renamed to ensure better comparison and consistency. When running the definition of each theme against each other, a few candidate themes were identified as better representing a sub-theme. Therefore the final number of themes were reduced to six major distinct themes representing respondents' imagined 'action options'.

Last, for the deductive part of the analysis, the moral issues identified in each scenario as well as the six themes were compared to moral 'elements' in Morality as Cooperation Theory (MCT); seeing to what degree the solutions imagined by respondents corresponded with the theory's own domain predictions and in what ways they diverged across dilemmas.

Acknowledgement of the author's theoretical position

Due to the very nature of qualitative methodology, it is imperative to reflect on the researcher's own background, presumptions and intentions. I, Arya Arjomand, before conducting this study had no previous experience with doing thematic analysis and by extension little exposure and experience with qualitative methods. I acknowledge that in this type of research, an important principle is the active role the researcher plays in interpreting the data and shaping the themes. In this report, I demonstrate awareness of this principle by avoiding language of themes and moral landscape 'emerging' or being 'discovered' and by disclosing my theoretical framework as follows.

For this research, which took place from September 2021 to January 2022, I maintained analytical idealism (Kastrup, 2019) as my ontological axiom; this means that as a premise I took universal consciousness as the sole ontological primitive; that is mind as the fundamental substrate of reality. With this backdrop, I was inclined towards giving experience primacy; hence, a phenomenological epistemological method in the form of thematic analysis is adapted. As outlined by Holloway and Todres (2003), the goal was to elucidate context-dependent meaning – the main research question – by exploring, in detail, people's imaginative experience through the narrative responses they presented. Therefore, a

straightforward relation between language, meaning and imaginative experience is assumed; in which the explicit transcriptions are ‘surface forms’ that enable the researcher to interpret ‘underlying features’ as themes (Braun & Clarke, 2006). This was thought of as a way to present the reader an emphatic understanding of general qualities of moral imagination as a phenomenon.

Results

The responses varied in length and richness of detail. Some responses were short and non-descriptive, forming only a sentences or two; while others were extensive and detailed, describing not only the problem dilemma identified in a given scenario and the chosen solution to tackle that problem, but also explaining the respondent’s reasons and context for their choices. In this section, first the moral landscape and respondent’s own action options for each scenario are presented in chronological order. The moral landscape includes answers to survey question one, two and three; that is what situation in the scenario respondents recognized as moral dilemmas, what views they had on the issues and what suggestions they had for potential acceptable course of action. Further details regarding one prominent moral issue is described, providing the different acceptable moral solutions imagined by the respondents. Then the common underlying themes among the scenarios are defined in detail per theme. A paragraph is dedicated to each action option interpreted from the respondents when imagining themselves in a given scenario.

Scenario 1: The Funeral

Figure 1 showcases the first moral dilemma scenario, depicting people in a funeral setting during the Covid pandemic. Respondents imagined a wide range of moral issues focusing on different parts of the drawing.



Figure 1. Scenario 1: The funeral in Corona times.

Moral Landscape

Surveillance cameras. Some participants from Greece, Finland and the Netherlands expressed concern over the security cameras, with one stating, “Who wants to monitor and guard all this with the help of two cameras?”. A respondent from Greece pointed out this dilemma as follows, “whether the person should respond positively or negatively to the handshake offered by the other person”. Because this character is “under surveillance”, he feels “internally pressured” and displays “various contradictory emotional states”. Multiple respondents from Finland found this view of *cameras as tools of surveillance* to pressure the funeral attendants into complying with the distancing measures as “quite immoral and intrusive”. As a morally acceptable solution to this dilemma, respondents urged to have the cameras “off!”, or as suggested by a respondent from Netherlands “to not use technology for monitoring in this type of situation, but for streaming the funeral, facilitating other forms of saying goodbye”.

Social conduct. The most prevalent imagined moral dilemma among the responses was how the funeral attendants should balance taking “the necessary steps to protect their

loved ones” by “keeping Corona distancing measures in min”, while at the same time taking into account “the physical proximity necessary to comfort and share their feelings of loss” possibly “risking spreading the virus”

Respondents described the difficulty of taking “necessary steps” such as “guarding your own safety” by “wearing a face mask”, emphasizing “should not go close” to others in the funeral, pointing out restrictions such as “can’t shake hands” and to “adhere to safety distances”; implying the importance of avoiding physical proximity for the fear of “spreading the contagion”. A respondent from Finland captured the above sentiments by imagining and contrasting the actions of the characters on the left, stating “The man on the left would like to touch and comfort the person in the wheelchair, but the woman is trying to stop him. The next group does not care about the rules, but hugs each other. But is that right? Can safety be ignored because of grief?... Shouldn’t one comfort another, or is it more important to keep safety distances?”; with “comfort” being define as physical contact, “Can I touch? Comfort?”, the most expressed example was being “able to hug”. Furthermore, while respondents from Greece and Finland mainly focused on physical contact as show of support and affection, respondents from Ecuador and Netherlands also stressed emotional expression as a way to show support to others at the funeral. Not being able to “show feelings” or be able to “mourn”, wanting to “offer my condolences as we are used to in our culture” yet not being allowed to “according to the rules”. Overall the dilemma can be summarized as when “Grief makes you want to hug and comfort, but you should not go close” to not run the “The risk of infection”.

Morally acceptable solutions for social conduct. Views on what is a morally acceptable solution in this scenario for the characters was varied and often times conflicting in its approach to resolving this dilemma. Some advocated to “Comply with the biosafety protocols. Avoid contact” at all costs, putting importance for the characters to follow the safety guidelines, to find alternative ways to express support such as “To be content with an

eye contact and to express their feelings in words” and that “Actually you cannot do much” in this situation as the risks of infection are “priority”, that one should stay “home if sick”.

Another view prevalent among respondents from Ecuador was the importance of affection and support in the funeral, stating, that “if a person in the family dies, I know that at that moment all the closest relatives will forget about the mask or the distancing” indicating in such time when faced with pain and grief forgetting the distancing rules is understandable. A respondent from Ecuador puts it as such “I don’t know how you could face something so painful and at the same time remember the current rules”. Others echoed this statement, stressing the importance of “what the relationship is with the other” and that “in a space of mourning, it is practically impossible to establish social distancing, as a norm (rule)” and being “able to physically comfort people in such a loss is of greater human importance”. These sentiments indicate the priority of human connection in time of grief over following societal rules and restrictions. The groups who emphasized one approach over the other displayed a mutually exclusive view towards either acceptable option; whether to follow the rules or act based on instinctual emotions.

Others however, suggested a more pragmatic and “balanced” solution for the characters. One respondent from Greece stated, “to ask the other before approaching him and agree on how they should act in each interaction”, specifically in regards to the character “who goes to comfort the person in the wheelchair and the one who suggests shaking hands with the other” asking to see “what they consider acceptable to each other at the moment. This view was echoed by another respondent from the Netherlands who preferred to make “a different assessment of risks in the situation” and to “Weigh what is more important” depending on how the funeral goes, stating that “morally acceptable thing is to wear a mask. Beyond that, in such a situation, a hug might be morally justified” indicating that following both the distancing rules and providing physical comfort are compatible acceptable solutions and that one can “not really know” for certain beforehand.

Overall, the acceptable solutions for this dilemma seems to be a choice between sticking to Covid distancing rules as necessary action to protect physical safety, or provide physical and emotional comfort to loved ones and oneself at this vulnerable funeral setting. Some respondents appeared to view these two options as mutually exclusive and chose only one as their acceptable moral solution to this dilemma in opposition to the other. However, as mentioned above some respondents did not frame these solutions as a dichotomy and chose a compromise of the two, opting for a middle ground to behave in the funeral. The following section will explore how respondents imagined themselves in the funeral setting.

Respondent's imagined action options

Respondents imagined different courses of action when asked what they themselves would do in the funeral scenario. First, some chose to provide physical comfort only on the *basis of relation*, stating that “Depending on what kind of relationship” they have “with the person who invited” them or their relationship “with the deceased” they would “decide to either go or not go”. For this group “It matters a lot what the relationship is with the other”, implying that an *exception* can be made “If the person were very close”. The closer the person is to the deceased or other funeral attendants, the more “not following the measures” is seen as justified. This closeness in the relationship can be seen as a spectrum, with closest being familial ties. Many respondents gave sentiments such as “If I am a close family member, I would not refuse to offer support that consists of hugs and handshakes”. They would “forget all the rules” and find it difficult to “follow any instructions in that situation”. On the other hand, if they themselves were mere acquaintances, they preferred to stick to the rules, mentioning “if the person was not so close” following the “rules” would be “easier”, that “A handshake or other close contact would not be necessary”. From these excerpts, we can see a clear distinction being made between what is the acceptable moral course of action depending on the degree of interpersonal *relationship* one has with either the deceased or others attending the funeral.

Second, another common course of action was sticking to the distancing due to the perceived *risk of harm* the virus has. These respondents emphasized the importance of maintaining Covid rules above all else. They would reluctantly attend the funeral but “keep the necessary distances”. Some explicitly stated they would adhere to the distancing rules despite the need for physical contact or their relation with others, with one participant stating “Even if it was my mother's partner's funeral and I needed physical contact, I would keep a distance from the others and wear a face mask”; further stating “the reasons are simple, I want to contribute as little as possible to the spread of the virus”. This group expressed their concern for “safety of others”, wanting to “take care not to endanger myself and those around me”, particularly those they consider “vulnerable group” for Covid-19. These respondents highlighted the need to “look for other ways to express my sadness, grief, love and support to those around me”. From these statements, it is evident the action option that minimizes risks involved to physical health and safety is considered morally acceptable.

Third, a number of respondents preferred to both adhere to some aspects of the safety rules while at the same time providing physical and emotional comfort. A few participants mentioned they would “attend the funeral wearing a mask” but “not avoid physical contact with people”. This group imagined a compromise between the available action options, preferring to “make a different assessment of risks in the situation”, emphasizing the need to have a *pragmatic attitude*, to act “in the moment”. They provided specific examples of what they would personally do to “keep safety distances” in a “polite” manner, for instance by “take care of good hand hygiene throughout the funeral” thus finding a handshake “acceptable” in “some situations”. In this group maintaining some Covid measures yet at the same time providing some form of limited physical comfort based on individual pragmatic assessment of the situation at hand can be discerned as the optimal course of moral action.

Fourth, some participants imagined to base their course of action on *wishes and opinions of the other* involved in the funeral regardless of relationship ties. Describing

affection and empathy for “grief” and “loss” of others, these respondents, found the “most balanced solution” as “ask the other” for their wishes and together “agree on how they should act in each interaction”, opting to “Moving along [adapting] with the preferences of the people around me. If they want to keep their distance, I respect that”. It can be seen this group valued cooperating with the needs and wishes of the others involved, choosing the desired solution that best is compatible with what others deem appropriate.

In summary, regardless of which morally acceptable solution was preferred by respondents, be it prioritizing providing comfort or physical safety or maintaining a middle ground between the two, four sentiments were distinguished in what respondents based their morally acceptable course of action on. The acceptable moral course of action for this scenario can be based on:

1. The person’s relationship with the deceased or other attendees.
2. Potential risk of physical harm to one selves or others.
3. A flexible, pragmatic individual assessment of the situation.
4. The preferences and wishes of others regardless of type of relationship between self and other.

Finally, it should be noted that respondents from all four countries discerned all four sentiments; no apparent preference was interpreted between countries. When asked what the characters in the funeral should do, responses varied across the four sentiments. However, when participants were asked to imagine themselves as a close family member attending the funeral, many respondents shifted their morally acceptable solution towards providing comfort and valued relationship sentiment when providing a basis for their choice.

Scenario 2: Vaccination certification in shops

Figure 2 illustrates the second moral dilemma scenario in which customers must decide which shop they would go to in the time of pandemic. The moral issues were oriented around the *vaccination certificate* and the different potential consequences it could lead to. They imagined these consequences from perspective of different characters; specifically the shop owners and customers. It should be noted here again that at time when the survey was taken (September to November 2020), a vaccine certification did not yet have widespread implementation and merely a topic of conversation among ethicist and political figures as a potential scenario for future.

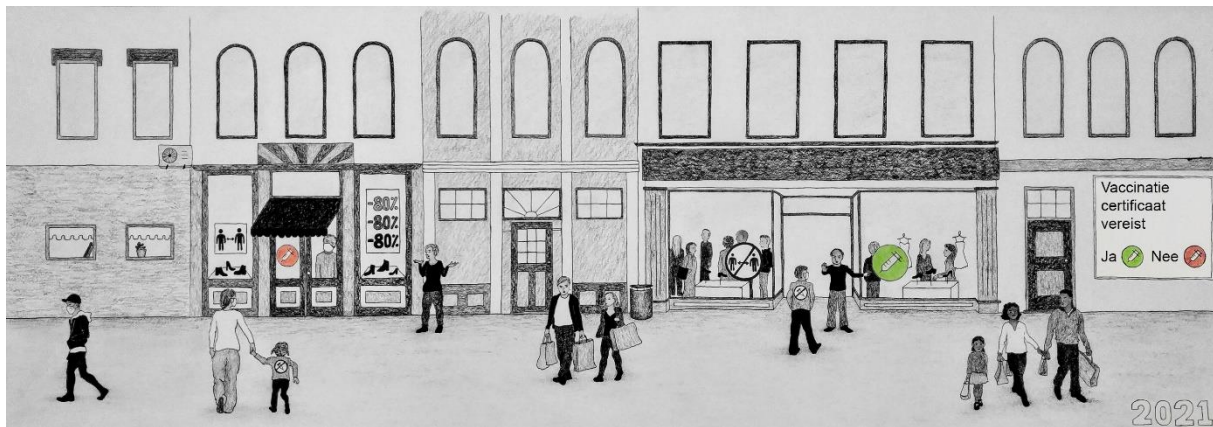


Figure 2 Scenario 2 showcasing two shops during Corona times. The shop on the left requires no vaccine certification while the shop on the right only allows customers with a certificate to enter.

Moral landscape

Vaccination as impingement on freedom. Respondents from Netherlands showed concern for how the vaccination procedure is enforced. On one hand, they stated, “Vaccination only works if a certain percentage is vaccinated”. On the other hand, they fear to “Lose” their “free choice” if they would “have to” be vaccinated, viewing “oblige people to get vaccinated” as a morally questionable approach in administering vaccination.

Shop owner decisions as extreme reaction. A respondent from Ecuador found both shops as two “extreme” reactions to the Corona situation, Stating one shop is “without any biosecurity measures” while the other “enforces extreme” measures. Respondent found the way these shops have handled the situation as “quite extreme”, reason being that they “limit

access” for customers unnecessarily and that they “do not abide by the basic biosecurity measures that have been established by health organizations”.

Vaccination as Socio-economic discrimination & division. Comparing the two shops’ differences in operation, respondents highlighted the possibility of “exclusion” and “social divide” among the customers who choose either shop; stating the “discrimination that could exist between vaccinated people and those who have not yet done so” can be the “most complicated dilemma”. From the perspective of shop owners, respondents saw putting “shops in an unequal position”, stating “is it right to select clients based on whether they are vaccinated or not?”. Respondents figured the “choice” of making certificate mandatory for entrance can “costs customers” for both shops. The respondents see putting one shop in an “unfair” economic disadvantage because of the certificate as a moral issue.

From perspective of customers, respondents pointed out the people who “have been vaccinated” can have easier access to “commercial premises”. This can leave out “many options” for those who have not obtained “certificate of vacation, either because of principles against vaccinations or because they did not have access to it”, leading to a “new form of exclusion for certain people”. Others expressed concern for those who even if willing, for variety of reasons cannot obtain a certificate, citing potential “health reasons” difficulty to “afford” the certificate financially. A respondent concluded that these restrictions could “create a so-called better part of the population and give them privileges because they have taken the vaccine”, asking “Is it permissible to discriminate on the basis of vaccination?”, and to “treat the vaccinated differently with the non-vaccinated?”. Clearly, socio-economic concerns are at the forefront of issues imagined by these respondents.

Overall, the moral dilemma seems to be oriented around how customers and shop owners should respond to vaccination measures that the Covid-19 pandemic is putting on the commercial areas. Respondents imagined a range of issues the vaccination certificate can cause, from restrictions of individual freedom, to sparking extreme reactions from shop

owners to potential socio-economic discrimination for customers. The prevalent moral issue seems to be the question of whether possession of certificate should be a requirement for shop owners and customers or not.

Morally acceptable solutions. Similar to previous scenario, respondents provided a number of different morally acceptable solutions to the issues identified above.

Some refused the premise of dividing shops based on vaccine requirement, advocating for “breaking the barrier that separates them” and that “the shopping centers should be open to everyone”. As an example, the respondent who took issue with the extreme reaction of both shops proposed to establish alternative “bio security measures” such as using “face masks” or “taking temperature before entering”. These measures were imagined as a viable “middle ground” that would help “re-establish commercial activities” and “protect each of the citizens”. Shops were urged to “come up with different ways to do business” regardless of “whether a person is vaccinated or not”.

Others saw taking the vaccine as the only morally acceptable solutions due to health concerns, stating that “its use is a responsibility, not towards ourselves, but to society”, and that “all actors in society” should “comply with the requirements for the health of all”. Therefore, the left shop “should also request the vaccination certificate” in order for people to “feel more at ease”.

For those concerned with socio-economic discrimination yet viewing vaccination as necessary, enabling access to vaccine for everyone regardless of financial capabilities was considered as the morally acceptable course of action. This group advocated for help from governments and official authorities, stating “the government should guarantee access to vaccines for the poor” in hopes of enabling access to “All places” for “everyone” thus preventing division based on socio-economic status.

However, not all respondents who were concerned about division in society shared the “vaccination for all” view. Some pointed out “one needs to respect” that “not everyone can or

wants a vaccine” and that these people “should not be denied entry to certain sites” regardless of their vaccination status. This group advocated for “Removing signs” related to the certificate from the right store and that “no exclusion of any kind” should take place.

Lastly, those who had an ambivalent stance on vaccinating highlighted individual, personal decision-making for both shop owners and customers. They viewed “use the vaccine is not only a matter of health but also of freedom”. They imagined allowing individuals to “choose for themselves” whether they want to get vaccinated or not, viewing either as morally acceptable. That one can “buy where you want” and “try to enter the store if you have not been vaccinated”, but also “must deal with” consequence of their choice, taking “personal responsibility” if they are “refused” entry. This view was most prevalent among participants from Greece and Finland.

Respondent’s imagined action options

Respondents provided different courses of action when asked what they themselves would do in this scenario if they were a customer. As stated above, many respondents rejected the restriction of choice and viewed the divide between the shops as morally unacceptable. These respondents chose to visit both shops regardless if they were vaccinated, as seen in this example “If I had a vaccination I would go to both shops. In this way, my money would go also to the shops that do not require a certificate. In that case, that shop would remain in business and be open to those customers who do not have access to a store that requires vaccination”. These respondents wanted “not to support the separation” of shops and customers. They would “look for solutions that suit everyone because I would like to fade the border fences”. It can be seen that this group views the morally acceptable course of action as *accommodating and including maximum number of individual preferences*.

Others stressed the importance of *harm avoidance* as a guiding principle for choosing the morally correct course of action. On one hand many cited importance of getting vaccinated and “choose the option of going to places that admit vaccinated people” duo to

perception that “in these spaces it will be less likely to be infected”. This group considered a shop that “a vaccination certificate is required” to be “where I would feel safest”. On the other hand, some were concerned over potential “long term health risks” of the vaccine itself, stating “I would choose not to get vaccinated yet. I would first like to know the results in the longer term”. From these responses, it can be seen that *potential for physical harm* is perceived for both possible solutions and *health safety* concerns can be used as justification to see either taking or not taking the vaccine as morally acceptable solution.

Some respondents were most concerned with how vaccination requirement could breach their *individual “freedom of choice”*. Most respondents in this group “would choose the store where the vaccine is not required” as morally acceptable course of action. Regardless of “whether I have been vaccinated or not”, these respondents “would rather support the store that does not require the vaccine” because “it does not make sense for someone else to make the decisions of your life and to impose on you, even indirectly, what you as a consumer can do”. However, some of the respondents who valued individual choice “prefer not to go shopping at all”, being “very much against a registration system that determines where I can go and stand”. These respondents who “do not want to be vaccinated”, heavily emphasized to “Take personal security measures”, placing responsibility on the individual to decide for themselves which measures they would follow in which shop.

Lastly, a number of respondents preferred to put *trust in expert authority* “whose opinion I will follow” in imagining what would be the best course of action. This group emphasized respecting the “rules and the places that require me to be vaccinated”. If ones “doctor” or the “government” would “recommend” to “get the vaccine” they would not hesitate to follow the instruction of official or expert opinion.

In summary, the respondents gave a variety of morally acceptable courses of action based on, among other things, whether they wanted to take the vaccine themselves attempting to avoid division within society. In total, four sentiments were distinguished in what

respondents based their morally acceptable course of action on. The acceptable moral course of action for this scenario can be based on:

1. Accommodating maximum number of individual preferences.
2. Avoiding harm and health risks above all else.
3. Prioritizing individual freedom of choice.
4. Following expert or official guidelines.

Scenario 3: Navigating and sharing conflicting information

Figure 3 depicts the third moral dilemma scenario focusing on how one can handle conflicting and contradictory information about the Covid pandemic. In contrast to the previous dilemmas, many participants did not formulate clear moral issues from this scenario picture. The original survey question (Appendix) focused on navigating and sharing conflicting information, possibility limiting the scope of imagined moral issues for this scenario to answering this specific question.



Figure 3 Scenario 3 showcasing how two individuals of the same household could manage information flow in times of Covid-19 pandemic

Moral landscape

Some respondents focused on the two characters in the image, describing their “positions or ways of facing the pandemic” as two “extreme” reactions. On one hand, on the left, respondents took issue with the character who is “totally relaxed” with “plants as a kind of screen or protection” from the “hassles” brought by “confinement”. This character was

seen as preferring “not to see or read anything about what is happening in the world” which respondents identified as a questionable attitude to “face” the “reality” of Covid-19. On the other hand, the character “who faces all the information” is called into question as well. Besides being faced by “false theories that are spread especially by social media”, respondents viewed this character to be “much more exposed to anxiety and stress” in the way they are reacting to the pandemic. “Which information should” one consider to be true was a common sentiment among respondents.

Overall, the main moral problem identified by respondents in this scenario seemed to be not a problem of ‘what’ but rather ‘how’; that is how one can find reliable sources of information about the pandemic. Therefore, the morally acceptable solutions participants imagined for the characters and themselves were directly tied to the action option they chose for each solution.

Respondent’s imagined action options

As with previous scenarios, respondents argued for different courses of action when asked how they themselves would navigate and share conflicting information, opinions and advice about the coronavirus crisis.

Similar to scenario two, some respondents put their trust in expert and authoritative figures. These respondents expressed a lack of direct interest in finding and figuring out pandemic information by themselves. Instead preferring to *follow the opinion* of people they found trust worthy or an expert on the subject matter. As an example, a participant stated that they “have a partner who keeps track of the scientific research on the corona virus and is steering his own course...I rely largely on his insights and do not worry for myself about the corona virus”. These respondents cited informing themselves “through official media” that possess “credibility” such as “Ministry of Health, the World Health Organization”. Many choosing to “review data provided by experts in the field” and to “not believe the false news that is reproduced by social media”. This group make a clear distinction between “official

news” and sources that are “not necessarily reliable”, recognizing the former as the sole “most reliable and authoritative sources of information and advice. As is evident in these examples, respondents made a distinction between sources they deem legitimate and ones that should not be trusted, preferring to find reliable information in form of *expert or official recommendation*.

In contrast, many respondents preferred to rely on their own intuition and judgement to decide what information to deem reliable and useful. These respondents thought it “important to be informed” however one “should not exaggerate and overwhelm” oneself with “so much information” indicating a balanced approach to handling information in contrast to the “two extremes” displayed by the characters. Furthermore, these respondents found to “stand in” their own “opinion” to be crucial, stating “each person has the freedom to comment from their perspective”. One participant captured this sentiment clearly, imagining themselves to “read and watch and listen to the information and try to see what the most important core is ...I adapt in my behaviour, but remain my own mind. Dealing with all these things is my own responsibility. I follow the news about it, but remain conscious of my own choices”. As can be seen in these examples, these respondents emphasized *adapting to the situations*. They prefer a *middle way* in deciding what sources of information to view as reliable; to *make up one’s own mind* when it comes to everyday problems that the pandemic will cause and to maintain a balanced perspective.

Lastly, some respondents encouraged *open and collective communication* as a way to navigate difficult and contradictory information. They deplored the “two extremes” ways depicted in the figure, stressing that the best way to figure out what is the most reliable information is to “talk to each other, listening to each other, taking a critical look at the information offered together, exchanging and weighing many different messages”. These respondents imagined finding reliable information “Through social networks”, and to “Call your neighbours to meetings”. For these respondents then, the best way to navigate

information is to *include as many perspectives* as possible and *come to a collective consensus* on what can be considered legitimate information on the pandemic.

In summary, the three actions option that respondents imagined in order to navigate conflicting information can be stated as following sentiments:

1. Trusting the opinion of experts and information provide by official authorities.
2. Relying on one’s own intuition and judgement to decide what information to deem reliable and useful.
3. Collaborating with other community members to figure out collectively the most reliable sources of information.

Scenario 4: Facing surveillance in 2025

Figure 4 highlights the fourth moral dilemma scenario depicting a future where digital surveillance over pandemic related rules have caused civil unrest. Moral issues imagined by respondents centred on the usage of surveillance cameras and the reaction of characters to them.



Figure 4 Scenario 4 depicting a future where surveillance measures have restricted movement in the public space depending on vaccination status.

Moral landscape

Surveillance as oppression of freedom. Focusing on the conflict happening on the left of the scenario, respondents “Whether to go along or not” with the drones as “imposed

measures around the constant control of viruses”. On the one hand, they doubted the action of the characters who are combating the surveillance drones and cameras with statements such as “Breaking the camera is not right”. On the other hand, they questioned the usage of these devices as, stating “is surveillance right?”. Citing possibility to “limit your activity” and “make you feel uncomfortable”. This conflict of “Freedom versus health” was prevalent among respondents, stating that while it is desirable to have “as many people as possible vaccinated”, this method which is being presented as a way to “prevent the spread of the disease” is more likely a “way of controlling the people”. People should be able to “make their own choices”, that with this way of surveillance makes “their freedom” to become “greatly limited”, reducing ability to “participate in normal life”.

Surveillance as endangering privacy. Similar to above, another common sentiment was the “recording of the daily lives of citizens through cameras and drones” as an act that “violate privacy and consequently human rights”. Respondents pointed out “the fact that all the characters in the image are wearing a bright watch indicates that they are being watched by someone”. This conflict of “Privacy versus health” was one where on one hand, “people want privacy, not to be monitored by the government”. On the other hand, “it is important for the health of the vulnerable not to let unvaccinated people have too much contact so that the virus spreads”.

The implication of the above two dilemmas seems to be that one must either accept the imposed surveillance in order to ensure public health safety but risk reduction of privacy, and free movement in public space. Or oppose the surveillance measures either directly or through indirect means to protect privacy and freedom of movement but risk persecution. Both approaches were seen as morally acceptable solutions. Regardless of the choice, respondents pondered how they would, whether imagining opposing or accepting the measures. Focusing on the image, a respondent imagined themselves someone with the “green” band, doubting whether they should “help someone who is red by showing solidarity even though I as a green

do not have a problem?”. Another questioned “How will I resist?...Obvious or covert activist?”. The variety of acceptable courses of action is described in the following section.

Respondent’s imagined action options

Respondents imagined different courses of action when asked what they themselves would do in this situation. Some chose opposing the surveillance as the sole acceptable moral solution. This group advocated for the state to have “respect for every form of life and freedom of personal expression”, stating that “surveillance and control via cameras and drones” can be considered “oppressive and should not happen”. To “uphold the value that “Citizens’ freedom of movement must exist”, an open defiant attitude and even somewhat hostile civil disobedience to the surveillance was called for as the morally acceptable course of action, as can be seen in the above examples. Restriction of *basic human rights* was the determining sentiment for the decision.

Similar to the previous theme, other respondents advocated for opposition to the surveillance drones. However, their confrontation can be seen as less direct and violent. They held that one should not “destroy a camera, that's not okay”, stating that those who “can no longer handle the drones” in this scenario setting should “rather leave and discuss the whole drone story somewhere where people can do something with it”. They strongly advocated for “The property of others must not be destroyed”, that the issue is better “influenced, for example, through politics”. It can be seen that for this group, the issue is a *collective one*, and thus matters “should not be taken into your own hands” and that “Those who are against surveillance” should “put forth a complaint” that “come from communities/ collectives so that the actions and goals are more organized”. As an example, a respondent emphasizes that “As a citizen of an organized society”, one should “go to court”, to “respect the laws”, viewing “the justice system and elections” as proper way to handle this issue. Thus, it can be seen while these respondents are against the implementation of drones, they still condemn their

destruction; preferring instead for *action through official, democratic channels* and advocating for open inclusive dialogue and organized action.

In contrast to the above some respondents accepted the surveillance measures, citing *fear of public safety and health* as their motivating factor. These respondents stated that as long as they “contribute to a better, safer life for many”, that they “do not feel hindered in moving and living by digital surveillance” and would be “happy to do so”. To avoid stress and anxiety, to *avoid harm* to themselves.

Others concluded that the surveillance must be reluctantly accepted. Even though they “prefer to resist it tooth and nail”, they saw the situation as “unfortunately that is not feasible because it causes too much stress”. Following the “rules of the game” was seen as the only viable option “Due to the circumstances”. That if people expose themselves “to be monitored” they would “not be able to circulate and have a "normal" life. A respondent went as far as saying that “it is impossible today to oppose digital surveillance; they control us at home and outside of it. There is no going back, we are laboratory rats. there are no options”. This implies a kind of implicit *coercion by authority figures* as well as the notion of moral distress in which the individual feels morally responsible, yet he or she is constrained from doing what they perceive as morality correct. Thus, for these respondents, *personal security* seems to be the deciding factor for choosing to “go along” with the measures and rather refrain from political action.

In summary, the sentiments derived from the actions options for navigating conflict with digital surveillance are as follows:

1. Direct opposition based on violation of personal rights and freedoms.
2. Indirect opposition based on violation of democratic, collective rights.
3. Voluntary acceptance based on risk to physical and mental health.
4. Involuntary acceptance based on risk to personal safety due to coercion from authority figure.

Common themes underlying action options

Table 2 provides an overview of the common themes underlying the action options the respondents imagined; together with the name of the theme, key characteristics and in which scenario they appeared. These themes were formed by comparing the action option sentiments across scenarios for internally coherence and external distinctiveness. A detailed description of each theme is provided in the following section.

Table 2. An overview of the themes underlying the morally acceptable solutions found by participants across the four scenarios.

Name	Basic idea	Scenario appearance
Interpersonal relationship	<ul style="list-style-type: none"> ▪ Decision-making based on closeness I have with the other. ▪ The closer I am with the other, the more normal ‘rules’ can be disregarded in favour of the other’s perceived immediate needs. ▪ Family ties are considered closest to me on a spectrum of family, friends, acquaintances etc. 	1
Harm avoidance	<ul style="list-style-type: none"> ▪ Minimize or avoid harm at all costs. ▪ Concerned with safety of self, loves ones or society. ▪ Harm can be physical, mental, etc. 	1, 2, 4
Compliance with authority	<ul style="list-style-type: none"> • Chooses course of action taken by another figure that is identified as authority on the moral issue. They are the only reliable source. • Expert knows what he is talking about therefore, ‘I’ follow his opinion willingly. E.g. Doctors or scientist. • Official institution said what ‘I’ should do so have to follow reluctantly. E.g. Government or WHO. 	2, 3
Personal choice	<ul style="list-style-type: none"> • ‘I’ decide in the moment. • Each scenario is unique and their actions depends on the context. • Demonstrate flexibility in decision-making. Not bound by hard rules. 	2, 4

Pragmatic perspective	<ul style="list-style-type: none"> • ‘live and let live’ attitude to problem solving. • What one should do heavily depends on contextual factors. • Reject extreme views. Opt for middle ground approach. 	1, 3
Collaborative choice	<ul style="list-style-type: none"> • ‘We’ choose together. • Emphasizing Cooperation and inclusivity. • Empathy for fellow human’s suffering. 	1, 2, 3, 4

Interpersonal relationship. Respondent describes that their relation with the other characters involved in the scenario takes priority in their decision for morally acceptable solutions. This takes on the form of creating an exception in decision making for people who they feel have a close connection such as family members. In the case of the first scenario, the ‘normal’ socially prescribed rules of conduct, such as the Corona distancing measures in the funeral, can be disregarded to either follow what they themselves believe is best desirable for the family member or what the family member itself wishes to choose. However, for interactions with people outside the family circle the ‘normal’ rules apply. The more distance one is from family, the easier to follow the ‘normal’ rules.

Harm avoidance. Respondent describes that their decision is motivated by what harmful consequences a certain outcome of a solution will have on the wellbeing or health of respondent, loved ones or society as a whole. They prioritize a solution that best avoids or minimizes harm. Depending on the scenario, the potential harm inflicted can come in different forms such as physical or mental. This prioritization usually stems from either personal negative experience in the past or imagining the risks involved in the given scenario.

Compliance with authority. Decision heavily influenced by a figure that they consider to have a superior say than the respondent themselves on the subject matter of the scenario. This figure is either in form of an expert (doctor, scientist) or an official institution (government, WHO) in power. This figure usually acts as main reliable and valid source of

knowledge for them to form their opinion on what course of action is best to take regarding the scenario dilemma. Their decision is thus shaped by trust in this figure. However, a difference lies in the type of compliance. The expert is complied with voluntarily as they are seen to provide epistemic justification – i.e. how they know about the subject matter – implying a level of moral cognition in the follower to decide who to follow. This is in contrast to compliance with official decree of a government body or organization where an enforcement of law and fear of its consequences has made deference necessarily regardless of willingness.

Personal choice. The respondent emphasizes individual responsibility and personal experience in deciding a course of actions when navigating difficult moral dilemmas. A moral sense of personal freedom of choice is advocated for. The individual itself must be able to determine what aspect of moral problem to give attention to. They themselves decide which opinions or ideas are worthwhile for consideration when weighting the different solutions to moral problems. This group takes moral issue with any course of action that opposes or suppresses this sense of individual freedom. Individual freedom of choice is seen as a fundamental human right that takes precedence to other moral considerations.

Pragmatic perspective. The respondents in this theme, unlike the other themes, usually select more than two morally acceptable solutions to a problem; opting for a pluralist attitude. Where in other themes different solutions seemed incompatible and mutually exclusive, respondents in this theme try to reconcile apparent contradictions by adopting a ‘whatever works to navigate the problem’ in the specific context. Depending on how they would ‘feel’ or ‘think’ is right in the moment itself they would choose a ‘middle way’ between extreme views. Because of this perspective, they often provide little principled motivation or underlying abstract standard for their choice. The respondents in this theme emphasize the uniqueness and variability of each situation. They hold a ‘live and let live’ attitude towards preference of others,

preferring to avoid exclusion and sometimes taking into account preferences of others but not necessarily working with others towards a common solution.

Collaborative choice. Prioritizes a solution that takes into account the opinions and preferences of maximum number of people. Usually advocating for open, inclusive dialogue and cooperation between different parties. Preventing conflict of interest among groups and trying to include everyone in a dialogue are motivating factors for this theme. Emphasizing democratic values and rights (e.g. property rights and freedom of speech) and preferring solutions that maintain these rights for as many groups as possible. Usually demonstrate emotional support for suffering of fellow human beings. Thus, priority is given to listening to as many different viewpoints as possible in order to act collectively rather than individually.

Comparison with moral ‘elements’ of MCT

A number of moral issues identified by the participants can be considered problems of coordination such as *social conduct* in the first scenario, e.g. balancing the need for “physical proximity” and “necessary steps to protect....society as a whole” or *vaccination as socio-economic discrimination & division* in scenario two. However, all scenarios, with the exception of scenario three, contained moral issues that do not fall under the definition of game theory coordination problems such as vaccination and surveillance as *impingement on freedom* in scenario two and three respectively. Likewise, the *theme of personal choice* in particular can be considered the opposite of a coordination problem, as the emphasis of morally right action is put on the individual alone, without external considerations.

Comparing the themes with MCT ‘elements’, two out of six themes have somewhat fleshed out categorical correspondence with two of the moral ‘elements’; those being *interpersonal relationship* overlapping with *family values* in MCT and *Compliance with authority* overlapping with *deference*. ‘Family ties are considered closes to me on a spectrum of family, friends, acquaintances etc.’ (Table 2.) appears to be close to the equivalent definition ‘give your family special treatment’ (Table 1.) in MCT. However, the two differ in

the sense that MCT considers ‘family’ as an ‘element’ and categorically distinct from ‘friendship’, which in MCT is seen as a higher order ‘molecule’ derived from mutualism and exchange. In the responses, friendship and family were interpreted to be on the same spectrum of interpersonal relationship, with family being considered a closer bond than friendship across all participants. Furthermore, the notion of ‘Chooses course of action taken by another figure that is identified as authority on the moral issue’ (Table 2.) appears close to ‘submit to your superiors’ (Table 1.) in MCT. However, a nuanced difference exists in the sense that MCT deference ‘element’ appears to not account for the justified trust in authority; rather only conceptualizing involuntary submission to superiors.

The two themes of *personal choice* and *harm avoidance* did not have any correspondence with moral ‘elements’ nor with any of the 21 hypothesized moral ‘molecules’ in Curry et al. (2021). The theme of collaborative choice overlapped with three ‘elements’ of *group loyalty, fairness and property rights*. ‘work together rather than work’, ‘work together rather than work alone’ and ‘respect first possession’ all seemed to be encompassed within one theme in individual responses, not displaying external heterogeneity in any example excerpts. Lastly, the pragmatic perspective theme can be considered fundamentally in opposition to the combinatorial system of MCT, as the theme’s definition defies the very notion and suggests a certain flexible state-like view of morality rather than a definitive trait-like view as which MCT seems to present.

Discussion

This study explored through a narrative approach in what ways individuals from Ecuador, Finland Greece and the Netherlands interpreted novel moral dilemmas relating to the Covid-19 pandemic. Ambiguous drawing depicting potential future Covid-19 related scenarios were presented to participants in order to stimulate moral imagination. The goal of this study was to explore via thematic analysis what characterizes imaginative problem solving in these Covid-19 related moral dilemmas.

Overall, respondents across all countries identified multiple moral issues in each scenario. For example in the second scenario, respondents thought vaccination requirements themselves could impinge on individual freedom. Others took issue with reaction of the shop owners to the vaccine requirements, and some were concerned with potential socio-economic discrimination and division in society. The *diverse range* of imaginative deliberation can be viewed from these responses.

Respondents then expressed a wide range of acceptable solutions to these issues for the characters as well as different action options that they themselves would choose as morally appropriate course of action. Continuing with the example of scenario two, on one end of the spectrum, respondents chose the shop with vaccine as only acceptable option, citing health concerns brought about by Covid-19. On the opposite end, those concerned with discrimination and denial of individual rights advocated for removing vaccination requirements from shops entirely. Those in the 'middle' of the spectrum refused the premise of separating the shops based on vaccine requirements, preferring instead to find alternative methods such as wearing a mask to balance the need for security against the virus. These instances represented *conflicting sentiments* about tackling a given dilemma *between* respondents.

Six distinct action options that were generalized across the scenarios were interpreted as *themes*. These were labelled as *interpersonal relationship, harm avoidance, compliance with authority, personal choice, pragmatic perspective, collaborative choice*. These themes were interpreted as the underlying structure by which respondents oriented their imaginative deliberation. As an example, in second scenario, compliance with authority can be seen in those who would follow the recommendation of doctors and experts while personal freedom of choice was the basis for those who stressed individual responsibility and decision. In the same scenario, it should be highlighted that some respondents saw taking the vaccine as the correct action due to safety concerns from the virus. However, others had safety concerns

about the vaccine itself, therefore viewing not taking the vaccine as the morally correct course of action. It is interesting to note that *between different respondents*, the same underlying theme was used to appraise two mutually exclusive course of action as morally acceptable.

The above overview of findings leads to conflicting preliminary conclusions. On one hand, the diversity and sometimes contradictory choices between respondents highlighted in these responses make it difficult to ascertain moral universals that are applicable to all situations and all cultures consistently at all times. This assertion is aligned with critiques of the ‘innate moral faculty’ view which emphasizes that a ‘messier story’ such as the above account demonstrates a more versatile and variable, and relativist picture of morality (Prinz, 2007). On the other hand, the description of themes such as harm avoidance, compliance with authority and personal choice closely resemble the ‘innate domains’ put forth by Haidt (2013b) in his moral foundations theory. This gives support to the principal based, moral law frameworks of morality, which at the very least orients morality on the behavioural-cognitive level, if not on the biological level.

Regardless of above inconclusive assertions, what can hardly be put in doubt is the major role that moral imagination plays in moral deliberation. The richness of detail and individual differences in the way respondents tackled the problem scenarios lends credibility to Dewey’s pragmatic postulation of moral deliberation as “imaginative deliberative problem solving” (Johnson, 2016, p. 361). Respondents were faced with novel and future-oriented moral dilemmas that had little resemblance to prior Covid habitual experiences. Yet, without knowing in advance what the ‘right’ choice should be, most formulated clear proposals for many acceptable moral courses of action for the characters. This was done by playing out – in imaginative projection – the variety of viable narrative actions in a given scenario “without taking overt action”. Additionally, by putting themselves in the shoes of characters – an act of imaginative simulation of experiences and feelings of others – they appraised the scenarios in

form of “an intelligent process of moral inquiry” that helped them to “resolve conflicts, harmonize competing values, and expand possibilities for growth of meaning” (Johnson, 2016, p. 361).

Lastly, the six themes and identified moral issues were compared to the Morality as Cooperation theory (MCT) by Curry (2015) in order to assess its claims about the nature of morality. Since some moral issues from responses did not involve cooperation between actors, the claim that all identified moral problems are centred on problems of cooperation is rejected. This interpretation is in line with other criticism of theory (Bloom, 2019; as cited in Curry, Mullins, et al., 2019). Furthermore, lack of consistent categorical correspondence between the identified themes for all moral ‘elements’ undermines the systematic principals of the theory. Just what exactly is the relationship between different ‘elements’ and ‘elements’ and ‘molecules’? What are the proximate mechanisms by which ‘elements’ combine into ‘molecules’? These questions are left unanswered. Lastly, noticing the works of the Bedford & Yeh (2021) who map a historical evolution of the word and the concept of filial piety from ancient times to present day, a ‘dynamic’ changing definition can be understood for this virtue as opposed to the ‘static’ and stable definition of filial piety as virtue ‘molecule’ put forth by MCT.

With the above interpretations, conception of morality derived from Moral Law Folk theories such as MCT is partially called into question. According to Johnson (2016), Moral Law Folk Theories are to be seen as “a misguided attempt to freeze conceptions of right and wrong for all time, based on the erroneous assumption that we inhabit a closed and completed moral universe” (p. 361). This paper echoes this statement, rejecting the notion of closed and completed moral universe and a cognitive faculty view of morality that MCT entails by showing moral imagination can be viewed as “a person’s way of being in and transforming their world” (p. 366). Yet the structural regularities of moral deliberation can not be overlooked. Interpretive conception of similar themes across specific moral dilemmas

acknowledges a place for foundationalist moral epistemology though not necessarily from a natural scientism view. The prevalence of the collaborative choice theme among all scenarios suggests a major role for cooperation in human morality despite it not encompassing all moral issues.

Limitations, strengths and implications for future directions

The thematic analysis used in this study comes with notable limitations and criticisms. A potential criticism that can be levelled against this study is the reduced generalizability of the results due to the small sample size of 34 participants and inherit issues of inductive reasoning famously put forth by Karl Popper (Popper & Miller, 1983). As a response, the reader is reminded of the original goal of this study and the philosophical and methodological position of the researcher. The aim was to present a moral landscape; that is to showcase as many views on morally acceptable course of action as possible. The emphasize was on divergent participant perspectives and not a convergent formulation of most prominent responses. Under this phenomenological mode of inquiry, the proposed themes are essentially instrumentalist propositions in a pragmatic sense of John Dewey (Allman, 2013; Mattessich, 2012). In this view, knowledge is not seen as convergent formulation of most prominent ‘facts’ that *explains away* meaning and experience as subjective baggage to a world of ‘whizzing genes’ that determine our choices. Rather a diversification and deepening of understanding grounded in meaning of *immediate experience* is sought after. In this sense, the underlying themes were interpreted via an abductive creative leap, with their value as ideas being derived by their future success in active resolution of Covid related problem dilemmas.

This notion can be further developed in future studies. First, from an immediate clinical standpoint to face the pandemic, Borges et al. (2020) calls for potential *contextually bound and affectively sensitive* novel intervention tools to address moral distress resulting from Covid-19 moral dilemmas. Cultivating an act of imaginative moral deliberation can be a useful and easy to use technique to incorporate in interventions that deal with pandemic

related mental health issues. Second, from a prospective industry standpoint, Umbrello (2019) sees the potential of moral imagination as a flexible process to ground ethical considerations of value sensitive design (VSD) for creation of emergent industrial technologies. Third, from a political perspective, Patel and Phillips (2021) propose that moral imagination can enable societies to more critically examine how different interest groups, ethnic groups, organizations and institutions frame the pandemic's problems and solutions to those problems. They call for policy makers to incorporate diverse perspectives on the subject and above all avoid early consensus solutions that is characteristic of expert panels.

A potential limitation of the study is the manner in which survey questions were formulated across the four dilemmas differed in minor yet important ways. As an example, in the first and second scenarios, the questions were formulated in a much more open-ended manner; thus simulating a more diverse set of interpretations without drawing attention to any particular part of the drawing. However, in scenario three, the second and third survey questions' formulation (appendix) focused specifically on navigating and sharing conflicting information, possibility limiting the scope of imagined moral issues, explaining why many participants did not formulate clear moral issues for this scenario picture.

Another noteworthy limitation is the researcher's own worldview as outlined in the method section, specifically when analysing the findings in comparison with MCT. The researcher's idealist worldview is seemingly incongruous to scientific realism that MCT presupposes. Therefore, the moral landscape, actions options and themes interpreted from the data set could be implicitly formulated to present findings that counter claims of MCT. We hoped to mitigate this limitation by emphasizing a data driven approach to analysis and to disclose the researcher's position as openly as feasible. The researcher speculates that if another study were to endorse similar worldview and theoretical framework as MCT, they could potentially derive different themes than this study. However, even with different conceptualization of themes, the researcher suspects that these findings will still find morality

being about more than just problems of cooperation, a sentiment shared by other commentators on MCT (Bloom, 2019; as cited in Curry, Mullins, et al., 2019).

Despite the aforementioned limitations, there are many notable strengths to this study as well. Moral imagination continues to be an underrepresented area of study. This paper can be considered as preliminary a study of moral imagination and its constitutive role in moral cognition. After a comprehensive review of moral imagination literature, Samuelson (2007) concludes that one of the best empirical methods to accurately conceptualize and study moral imagination is via open-ended narrative moral dilemmas; which the current study has utilized in the form of visual narrative drawings. However, it should be noted that the thematic analysis utilized in this study merely gives a qualitative indications of moral imagination across dilemmas. The paper did not directly investigate an individual's *degree* of moral imagination as an operationalized construct. Samuelson (2007) further notes possible link between moral creativity and imagination, and proposes tests which are normally reserved for moral creativity, such as assessment tasks by Runco and Nemiro (2003) that use dimensions of *fluency, originality and flexibility* to use as operationalized constructs for moral creativity. This can be seen as a future avenue for research on moral imagination as an individual's creative problem-solving ability.

In conclusion, through the above reasoning and examples, the study hopes to have demonstrated both the practical and theoretical possibilities of moral imagination as crucial means of assessing anticipatory moral dilemmas.

References

- Anjum, S., Ullah, R., Suleman Rana, M., Ali Khan, H., Shabir Memon, F., Ahmed, Y., Jabeen, S., & Faryal, R. (2020). Covid-19 Pandemic: A Serious Threat for Public Mental Health Globally. *Psychiatria Danubina*, 32(2), 245–250.
<https://doi.org/10.24869/psyd.2020.245>

- Bedford, O., & Yeh, K. H. (2021). Evolution of the Conceptualization of Filial Piety in the Global Context: From Skin to Skeleton. *Frontiers in Psychology, 12*.
<https://doi.org/10.3389/fpsyg.2021.570547>
- Biss, M. (2014). Moral Imagination, Perception, and Judgment. *The Southern Journal of Philosophy, 52*(1), 1–21. <https://doi.org/10.1111/sjp.12050>
- Borges, L. M., Barnes, S. M., Farnsworth, J. K., Drescher, K. D., & Walser, R. D. (2020). A contextual behavioral approach for responding to moral dilemmas in the age of COVID-19. *Journal of Contextual Behavioral Science, 17*, 95–101.
<https://doi.org/10.1016/j.jcbs.2020.06.006>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
- Cramer, P. (1999). Future Directions for the Thematic Apperception Test. *Journal of Personality Assessment, 72*(1), 74–92. https://doi.org/10.1207/s15327752jpa7201_5
- Curry, O. S. (2007). The conflict-resolution theory of virtue. In W. Sinnott-Armstrong & C. B. Miller (Eds.), *Moral Psychology: The Evolution of Morality* (First Edition, Vol. 1, pp. 251–261). The MIT Press.
- Curry, O. S. (2016). Morality as Cooperation: A Problem-Centred Approach. In *The Evolution of Morality* (1st ed., pp. 27–51). Springer. https://doi.org/10.1007/978-3-319-19671-8_2
- Curry, O. S., Alfano, M., Brandt, M. J., & Pelican, C. (2021). Moral Molecules: Morality as a Combinatorial System. *Review of Philosophy and Psychology*.
<https://doi.org/10.1007/s13164-021-00540-x>
- Curry, O. S., Jones Chesters, M., & van Lissa, C. J. (2019). Mapping morality with a compass: Testing the theory of ‘morality-as-cooperation’ with a new questionnaire. *Journal of Research in Personality, 78*, 106–124.
<https://doi.org/10.1016/j.jrp.2018.10.008>

- Curry, O. S., Mullins, D. A., & Whitehouse, H. (2019). Is It Good to Cooperate? Testing the Theory of Morality-as-Cooperation in 60 Societies. *Current Anthropology*, *60*(1), 47–69. <https://doi.org/10.1086/701478>
- Dubey, S., Biswas, P., Ghosh, R., Chatterjee, S., Dubey, M. J., Chatterjee, S., Lahiri, D., & Lavie, C. J. (2020). Psychosocial impact of COVID-19. *Diabetes & Metabolic Syndrome: Clinical Research & Reviews*, *14*(5), 779–788. <https://doi.org/10.1016/j.dsx.2020.05.035>
- Greene, J. D. (2015). The rise of moral cognition. *Cognition*, *135*, 39–42. <https://doi.org/10.1016/j.cognition.2014.11.018>
- Haidt, J. (2007). The New Synthesis in Moral Psychology. *Science*, *316*(5827), 998–1002. <https://doi.org/10.1126/science.1137651>
- Haidt, J. (2013a). Moral psychology for the twenty-first century. *Journal of Moral Education*, *42*(3), 281–297. <https://doi.org/10.1080/03057240.2013.817327>
- Haidt, J. (2013b). *The Righteous Mind: Why Good People Are Divided by Politics and Religion* (Illustrated ed.). Vintage.
- Holloway, I., & Todres, L. (2003). The Status of Method: Flexibility, Consistency and Coherence. *Qualitative Research*, *3*(3), 345–357. <https://doi.org/10.1177/1468794103033004>
- Hossain, M. M., Sultana, A., & Purohit, N. (2020). Mental health outcomes of quarantine and isolation for infection prevention: A systematic umbrella review of the global evidence. *Epidemiology and Health*. <https://doi.org/10.4178/epih.e2020038>
- Johns Hopkins University. (2020). *COVID-19 Dashboard by the Center for Systems Science and Engineering*. Arcgis.Com. Retrieved September 9, 2021, from <https://gisanddata.maps.arcgis.com/apps/dashboards/bda7594740fd40299423467b48e9ecf6>

- Johnson, M. (1993). *Moral Imagination: Implications of Cognitive Science for Ethics* (1st ed.). University of Chicago Press.
- Johnson, M. (2016). Moral imagination. In *The Routledge Handbook of Philosophy of Imagination* (1st Edition, pp. 355–367). Routledge.
- Jordan, D. K. (1998). Filial Piety Taiwanese Popular Thought. In W. H. Slote & G. A. de Vos (Eds.), *Confucianism and the Family: A Study of Indo-Tibetan Scholasticism* (pp. 267–282). State University of New York Press.
- Kastrup, B. (2019). Analytic Idealism: A consciousness-only ontology. Radboud University Nijmegen. <https://philpapers.org/rec/KASAIA-3>
- Mattessich, R. (2012). *Instrumental Reasoning and Systems Methodology*. Springer Publishing.
- Mazza, M., Attanasio, M., Pino, M. C., Masedu, F., Tiberti, S., Sarlo, M., & Valenti, M. (2020). Moral Decision-Making, Stress, and Social Cognition in Frontline Workers vs. Population Groups During the COVID-19 Pandemic: An Explorative Study. *Frontiers in Psychology, 11*. <https://doi.org/10.3389/fpsyg.2020.588159>
- Pardales, M. J. (2002). “So, How Did You Arrive at that Decision?” Connecting Moral Imagination and Moral Judgement. *Journal of Moral Education, 31*(4), 423–437. <https://doi.org/10.1080/0305724022000029653>
- Patel, M. S., & Phillips, C. B. (2021). COVID-19 and the moral imagination. *The Lancet, 397*(10275), 648–650. [https://doi.org/10.1016/s0140-6736\(21\)00151-3](https://doi.org/10.1016/s0140-6736(21)00151-3)
- Popper, K., & Miller, D. (1983). A proof of the impossibility of inductive probability. *Nature, 302*(5910), 687–688. <https://doi.org/10.1038/302687a0>
- Prinz, J. (2007). Is morality innate? In W. Sinnott-Armstrong & C. B. Miller (Eds.), *In Moral psychology: The Evolution of Morality* (1st ed., Vol. 1, pp. 367–406). The MIT Press.

- Runco, M. A., & Nemiro, J. (2003). Creativity in the Moral Domain: Integration and Implications. *Creativity Research Journal*, 15(1), 91–105.
https://doi.org/10.1207/s15326934crj1501_10
- Samuelson, P. L. (2007). *Moral Imagination in Theory and Practice* (Dissertation). Georgia State University. https://scholarworks.gsu.edu/epse_diss/45
- Shackelford, T. K., & Hansen, R. D. (2016). *The Evolution of Morality* (1st ed.). Springer.
- Stanford Encyclopedia of Philosophy. (2018, June 16). *Moral Dilemmas*. Plato.Stanford.Edu. Retrieved October 5, 2021, from <https://plato.stanford.edu/entries/moral-dilemmas/#ConMorDil>
- Sterelny, K., & Fraser, B. (2017). Evolution and Moral Realism. *The British Journal for the Philosophy of Science*, 68(4), 981–1006. <https://doi.org/10.1093/bjps/axv060>
- Tomasello, M., & Vaish, A. (2013). Origins of Human Cooperation and Morality. *Annual Review of Psychology*, 64(1), 231–255. <https://doi.org/10.1146/annurev-psych-113011-143812>
- Twente University. (2021a). *Our plague year*. Universiteit Twente. Retrieved September 9, 2021, from <https://www.utwente.nl/en/culture/events/2021/4/1016011/our-plague-year>
- Twente University. (2021b). *Post-Corona Futures*. Universiteit Twente. Retrieved September 9, 2021, from <https://www.utwente.nl/en/bms/ehealth/research/story-lab/post-corona%20Futures/>
- Umbrello, S. (2019). Imaginative Value Sensitive Design: Using Moral Imagination Theory to Inform Responsible Technology Design. *Science and Engineering Ethics*, 26(2), 575–595. <https://doi.org/10.1007/s11948-019-00104-4>

Appendix

Moral Dilemmas Survey Questions: 1st Set

21 September 2020

Personal Moral Dilemma:

1. Could you describe what is happening in the picture? What is the situation? Who are the characters? What do they do, feel or think?
2. What are the moral dilemmas you think the characters are facing in this picture? Try to make explicit as many moral dilemmas as you can.
3. Given the moral dilemmas you've identified, what should the characters do in this situation? Try to imagine as many morally acceptable options as you can.
4. Suppose you were to attend a funeral during the coronavirus crisis, what do you think you should do? Please make explicit the reasons for your choice.
5. Suppose you were either a very close family member of the deceased person or a mere acquaintance, what do you think you should do then? Please make explicit the reasons for your choice.

Moral Dilemmas Survey Questions: 2nd set

Personal Moral Dilemma:

1. Could you describe what is happening in the picture at a time when a COVID-19 vaccine is available? What is the situation? Who are the characters? What do they do, feel or think?
2. What are the moral dilemmas you think the characters are facing in this picture? Try to make explicit as many moral dilemmas as you can.
3. Given the moral dilemmas you've identified, what should the characters do in this situation? Try to imagine as many morally acceptable options as you can.
4. Out of these options, what would you choose if you were a client? Please make explicit the reasons for your choice.
5. Out of these options, what would you choose if you were a shop owner? Please make explicit the reasons for your choice.

Moral Dilemmas Survey Questions: 3rd Set

November 3, 2020

Personal Moral Dilemma:

1. Could you describe what is happening in the picture? What is the situation? Who are the characters? What do they do, feel or think?
2. How do you think the characters can responsibly navigate and share conflicting information, opinions and advice about the corona crisis? Try to imagine as many
3. responsible ways as you can?
4. How do you navigate and share conflicting information, opinions and advice about the coronavirus crisis? Please make explicit the reasons for your choice.
5. Do you think a person who lives in an information bubble radically opposed to yours can responsibly navigate and share information, opinions, and advice about the corona crisis? Please make explicit the reasons for your view.

Moral Dilemmas Survey Questions: 4th Set

Personal Moral Dilemma:

1. Could you describe what is happening in the picture set in 2025? What is the situation? Who are the characters? What do they do, feel or think?
2. What are the moral dilemmas you think the characters are facing in this picture? Try to make explicit as many moral dilemmas as you can.
3. Given the moral dilemmas you've identified, what should the characters do in this situation? Try to imagine as many morally acceptable options as you can.
4. Out of these options, what would you choose in this future if you were a person who is opposed to digital surveillance? Please make explicit the reasons for your choice.