Affective Paternalism

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This Version: November 2021

Abstract

Many decisions are curated, incentivised, or nudged by a third party. Despite this, only a handful of studies have looked at paternalistic decision-makers and the processes by which they arrive at their decisions. The role of *affect*, in particular, has been ignored so far, and yet restricting agency on a potentially large group of people might be unpleasant – or indeed quite satisfying. We are the first to propose a conceptual framework of *affective paternalism* which explicitly accounts for the role of affect, identifying entry points where affect may create systematic variance (or noise) in paternalistic decisions. We shed light on some of these phenomena by using novel surveys and a randomised experiment in which we ask participants to make paternalistic decisions whilst also asking them about their affective reactions and randomly manipulating their affective states. Our findings suggest that affect may play a significant role in paternalistic decision-making.

Key Words

Paternalism, Affect, Judgement and Decision-Making, Affective Paternalism, Experiments

1. Introduction

In the current environment, many decisions made by individuals are curated, incentivised, or nudged by a third party (Thaler & Sunstein, 2009). As an example, travellers can enter certain destinations only when getting vaccinated against Covid-19 or with a negative test result.

Understanding when, why, and how third parties decide to intervene in the choices of others – known as *paternalism* – is critical to understanding the behavioural and wellbeing-related causes and consequences of those choices.

Under paternalism, an agent, such as a policymaker, employer, or service provider, influences other individuals' choices to encourage “optimal” outcomes. They do this either through exploiting others' cognitive boundaries or biases (e.g. via nudges or choice architecture) or through coercion (e.g. via laws or fines). Importantly, paternalism – unlike authoritarianism or manipulation – assumes that these agents act out of a genuine desire to improve others' welfare (Thaler & Sunstein, 2003). Over the past decades, the literature on paternalism has been steadily growing, motivated by an increasing interest in behavioural public policy and, in particular, nudges (see Thaler & Benartzi (2004), Johnson & Goldstein (2003), or Madrian & Shea (2001) for early examples). While the field has focused mostly on the effectiveness of paternalistic interventions (see DellaVigna & Linos (2020) or Hummel & Maedche (2019) for reviews), much less attention has been paid at paternalistic decision-makers and the processes by which they arrive at their decisions.

Only a sparse literature examines paternalistic decision-making (see Ambuehl et al. (2021) for a review), though most of it focuses on the context of the paternalistic decision (like availability of information) or on stable attributes (like personality traits) of the decision-maker. The role of *affect*, however, has been ignored so far. This is an important gap because, by nature, paternalism involves restricting agency on a potentially large group of people,

which is both consequential and might be perceived as highly unpleasant by the decision-maker – or indeed quite satisfying. In part, this under-appreciation of affect may come about because we find it comforting to think of those who make decisions for us as sophisticated, rational beings, much like the technocratic social planner in economics. There is little room here for affect. At the same time, decades of research on affect, mood, and emotion (e.g. Damasio, 1994; Lerner & Keltner, 2001; Loewenstein et al., 2001; Slovic et al., 2007) document that our affective states significantly and predictably influence our judgements and decisions. This has culminated in what some have referred to as the *era of affectivism* (Dukes et al., 2021). It is thus imperative to extend its focus to include decision-making for others as well as for the self.

To fill this gap, we propose a conceptual framework of paternalistic decision-making that builds upon the *Emotion-Imbued Choice (EIC) Model* (Lerner et al., 2015), which represents a comprehensive account of emotions in individual decision-making and which can be extended to include decisions for others. We identify how affect can create *systematic* variance (or noise) in paternalistic decisions. The concept of *noise* has recently been explored by Kahneman et al. (2021), showing that it creates unequal experiences and potentially different interventions (e.g. nudges, fines, etc.) depending on non-pertinent details such as personality, weather, number of decision-makers, etc. In paternalism, we term the noise created by the influence of affect within the paternalistic decision-making process *affective paternalism*.

After outlining our framework, we provide some initial evidence on affective paternalism using the recent example of Covid-19 as an application. We examine its magnitude from novel surveys and a randomised experiment in which we let participants make paternalistic decisions while asking them about their affective reactions and randomly

manipulating their affective states. Finally, we discuss some policy implications, including emotion regulation in paternalism as well as questions regarding ecological rationality (i.e. whether affect in paternalism is necessarily undesirable) and outline avenues for future research. In doing so, we are joining two hitherto separate strands of literature – that on the role of affect in judgements and decisions (e.g. Damasio, 1994; Lerner & Keltner, 2001; Lerner et al., 2007; Loewenstein et al., 2001; Slovic et al., 2007) and that on paternalistic decision-making (e.g. Ambuehl et al., 2021; Bushong & Gagnon-Bartsch, 2021; Daniels & Zlatev, 2019), to obtain a more complete picture of how paternalistic decisions come about.

2. The Role of Affect in Judgements and Decisions

Affect is a broad concept that encompasses constructs such as mood, emotions, and emotional traits (Lerner et al., 2015). Within affect, emotions are defined as behavioural, cognitive, experiential, or expressive reactions regarding survival-level events, though within the field there is some interchangeability between terms (Hogg & Cooper, 2009). Here, we will use the term *affect* to encompass a wide range of constructs which could impact judgements and decisions. Since emotions are a cornerstone of affect, however, we give them special attention in our conceptual framework.

Emotions are considered one of the primary drivers of individual decision-making (cf. Ekman, 2007; Frijda, 1988; Keltner et al., 2014; Keltner & Lerner, 2010; Lazarus, 1991; Loewenstein et al., 2001; Scherer & Ekman, 1984). They have been shown to significantly and predictably influence judgements and decisions for the self in various domains, including risk-taking (cf. Lerner & Keltner, 2001), intertemporal choice (cf. Ifcher & Zarghamee, 2011), or pro-social behaviour (cf. Drouvelis & Grosskopf, 2016). Importantly, evidence has shown that the recipients of paternalism *themselves* respond with various emotions (Ackfeld

& Ockenfels, 2021; Bartling et al., 2014; Fehr et al., 2013; Kataria et al., 2014; Lübbecke & Schnedler, 2020).

Emotions can be broken down further into either integral or incidental, each of which have been shown to influence decision-making in distinct but interrelated ways (Hillebrandt & Barclay, 2017). Incidental emotions are carried over from unrelated events, such as frustration with traffic, but nevertheless influence the decision at hand. Integral emotions arise during the process of making the decision, such as excitement over a new option or fear of regret once a choice is made. Importantly, while incidental emotions can be experimentally manipulated, integral emotions prove more difficult (since they arise as a genuine reaction to the decision at hand). Hence, the study of integral emotions is often observational or self-reported in nature (Mauss & Robinson, 2009).

The *Emotion-Imbued Choice (EIC) Model*, proposed by Lerner et al. (2015), represents a comprehensive account of emotions in individual decision-making that captures these complex relationships between integral and incidental emotions and their influence on decisions. The model assumes, for simplicity, a one-time choice between given options, without the possibility of seeking additional information or options. It ends at the moment of decision, and does not include actual outcomes nor feelings that occur as a result of the decision. The model is shown in Figure 1.

Figure 1: Emotion-Imbued Choice (EIC) Model

Source: taken from Lerner et al. (2015).

In short, the model assumes that, for every decision, there is a conscious (or unconscious) evaluation of expected outcomes (Figure 1, A), which takes into consideration the characteristics of options (B1) and depends, to a certain extent, on the characteristics of the decision-maker (B2). In addition to these cognitive components (shown by black elements), the model also incorporates affective components (shown by green elements), by allowing these inputs to influence the current (integral) emotions of the decision-maker while making the decision. Anticipatory influences (A) – the impact of how one anticipates feeling *after* making a decision on how one feels *right now* – can include anticipated feelings of happiness or regret, depending on the decision at hand. Option characteristics (D1) that may induce emotional reactions include time delays, interpersonal comparisons, or ambiguity of choices, whereas examples of decision-maker characteristics (D2) include personality traits such as neuroticism, socio-emotional skills such as self-regulation, or social anxiety. Moreover, incidental factors may also influence the decision-maker's current emotional state (E). Such factors can range from feeling happier on a warm, sunny day (Keller et al., 2005; Lucas & Lawless, 2013) to being angry or violent due to traffic congestion (Beland & Brent, 2018). Often, the decision-maker may not even be consciously aware of the affective state he or she is in when making a decision.

Jointly, these factors influence evaluations (for instance, current sadness may make outcomes seem less rewarding) and thereby decisions (F) and, finally, outcomes (G). The model suggests that both cognitive *and* affective tracks must be understood to accurately predict an individual's decision. Though it has mostly been applied in the context of decisions for the self, the model can be applied – with some modifications – to decisions for others as well.

3. Affective Paternalism

Given the large, robust evidence base behind the EIC Model, and on the influence of emotions on judgements and decisions more generally, we take these core principles as the fundament to model the role of affect in paternalism. Figure 2 adapts the EIC Model to the distinct case of paternalism, and we refer to it as *EIC-P Model* from here on to make it distinct. A notable addition are the characteristics of those subjected to paternalism (which we refer to as *paternalistic targets*) (B3). Some characteristics are similar to those of the decision-maker (which we now refer to as *paternalistic agent*), such as demographics or preferences. Others are unique to paternalism, including the size and heterogeneity of the target group and its psychological distance from the agent. Importantly, the EIC-P Model can be applied to different strands of paternalism, including forms of *weak paternalism* (where agents interfere to help targets achieve their stated goals) and *strong paternalism* (where agents interfere because they think that targets' choices are mistaken), which often result in the same observed paternalistic decision taken. Note that, in reality, paternalistic decisions occur over a wide range of time horizons (with some legislation taking years to fully craft and enact), and can involve multiple paternalistic decision-makers. While we implicitly assume, for simplicity, a paternalistic decision that needs to be taken urgently (such as a public health, environmental, or financial crisis), the EIC-P Model is flexible enough to account for various time horizons (i.e. in characteristics of choice options, D1 below) and multiple individual decision-makers (i.e. in characteristics of agents, D2 below), both of which can impact current affective states due to, for example, diffusion of responsibility.

Figure 2: Emotion-Imbued Choice (EIC) Model for Paternalism (EIC-P)

Source: adapted from Lerner et al. (2015), own illustration.

In the cognitive track of paternalistic decision-making, the agent first calculates the expected outcome of each option in the option set so that it can enter evaluation (Figure 2, A). Each expected outcome is obtained by weighting the anticipated gains or losses from pursuing the option to all targets or target groups in society (which may include the agent) by their subjective probabilities, and then summing them up. Anticipated gains or losses can include emotions, of both paternalistic agents and targets, but these enter the calculus simply as benefits or costs. The paternalistic agent then evaluates the expected outcome of each option by computing its expected utility, which involves the characteristics of options (B1), agent (B2), and targets (B3). Finally, the agent chooses the option with the highest expected utility (F), which then may or may not lead to the desired outcome and the realisation of that utility (G).

Though sparse, the current literature on paternalism aligns well with this cognitive track of the EIC-P Model. For instance, studies have found that characteristics of options (B1) such as the degree of certainty or availability of information (Daniels & Zlatev, 2019; Lusk et al., 2013; Martin et al., 2016) influence paternalistic decisions, and so do characteristics of agents (B2) such as confirmation (Banuri et al., 2019) or self-projection bias (Ambuehl et al., 2021; Foerster et al., 2017; Gangadharan et al., 2015; Ifcher & Zarghamee, 2020; Jacobsson et al., 2007; Jacobsson et al., 2007; Lupoli et al., 2018, 2020). Likewise, characteristics of targets (B3) such as self-control or cognitive ability have been shown to significantly influence a paternalistic agent's decision-making (Bushong & Gagnon-Bartsch, 2021; Krawczyk & Wozny, 2017; Sheffer et al., 2017; Uhl, 2011).

So far, affect – in form of anticipated emotions of the paternalistic agent and targets – has entered the paternalistic decision-making process merely as benefit or cost (A). However, there are several entry ways through which the agent's affective state can influence

paternalistic decisions and thereby cause systematic deviations from decisions that would have otherwise be made had affect not been present. This is what we refer to as *affective paternalism*.

As before, the black elements represent the cognitive components, whereas the green represent those factors that have been shown to influence the decision-maker's affective state, as in the original EIC Model. The red elements are new and represent those factors that are *unique* to paternalism, which are (i) the requirement to make a decision on behalf of others to improve their welfare, (ii) the context surrounding paternalistic decision-making, (iii) the agent's affective association with the targets, and (iv) the anticipatory influence of the paternalistic decision's outcome on affect.

First, unique to paternalism is the requirement to intervene on behalf of others to improve their welfare. This itself may provoke an affective reaction (Figure 2, AP1), because taking the responsibility for interfering with others' choices – especially in situations that are risky and may even risk the lives of the targets, may be perceived as highly unpleasant. Intervening in other contexts, on the contrary, may be perceived as satisfying. Though they may vary based on context, the emotions that arise when being confronted with the requirement to intervene are integral to the agent's decision. Because each agent may have different emotional reactions to the requirement to intervene, their evaluations of options will vary as well, creating noise.

Second, and similarly unique to paternalism, the characteristics of paternalistic targets (AP2) may have an impact on affective evaluations. Reviewing targets' current state can evoke feelings of pity, amity, or disgust. These feelings integrally influence the current emotional state of the agent while making the paternalistic decision, altering evaluations and thereby subsequent decisions. In the literature on dehumanisation, for example, the

relationship between target characteristics and affective evaluations shows that emotions – particularly disgust – are an integral part of prejudice and dehumanisation (Buckels & Trapnell, 2013; Dalsklev & Kunst, 2015; Hodson & Costello, 2007; Hodson et al., 2013; Tapias et al., 2007), which may lead to support for deportation or discrimination (Bruneau et al., 2020; Dalsklev & Kunst, 2015). While these examples are obviously not in the best interest of the individual, and therefore not paternalistic in the sense of being welfare-enhancing for those directly affected by a decision, they do provide evidence that characteristics of the target group do influence affect.

A third factor unique to paternalism is the context in which paternalistic decisions typically take place (AP3): it is often characterized by complexity, risk, or uncertainty, which are, for instance, brought about by scientific advisers from different disciplines stressing different costs and benefits of options, competing special interest groups, or timely political pressures. In such situations, which are often the case in actual policymaking, the “right” course of action may not be *ex-ante* clear or even *ex-post* verifiable (because the counterfactual is not known or ever observable). Complexity and uncertainty influence affective states and reliance on affect in decision-making (Anderson et al., 2019; Faraji-Rad & Pham, 2017). Thus, the paternalistic context can reasonably be proposed to impact an agent’s affective state during conscious or non-conscious evaluations and subsequent decisions.

As for anticipation of affect once an outcome is chosen (AP4), paternalistic agents (as opposed to individual decision-makers) now forecast *three* sets of emotions, all of which may impact their current emotional state. First, agents anticipate their own emotions as being targets *themselves* under the intervention (if applicable). Second, they anticipate the emotions of (other) targets under the intervention, which may include targets’ emotional reactions towards the decision-maker, their emotional reactions towards the decision (e.g. targets being

upset about the decision but acknowledging the good intention of the agent), or both. Third, they anticipate their own emotions should targets follow the intervention, which may include feelings of satisfaction that targets are now on the “right” path, or a loss of identity now that their “help” is no longer needed.

Take choosing whether to ban indoor-smoking as an example, which has been a known public health issue for decades but has only recently been banned in many countries. First, agents would anticipate the emotions they would feel if they *themselves* were not allowed to smoke indoors anymore (if applicable). Second, they would anticipate the emotions (other) targets would feel if they were not allowed to smoke indoors, which may include frustration or relief at the ban. Third, they would anticipate the emotions they – as the agent – would feel if other targets were not allowed to smoke indoors, which may include satisfaction at not having to smell smoke in a bar or relief that children aren’t susceptible to lung cancer through second hand exposure. Anticipated emotions in this third category may also include broader aspects related to the *warm-glow* from helping others (cf. Andreoni, 1990) or aspects related to *ego*, i.e. the desire for a positive and consistent self-image that make agents feel better about themselves (Tajfel & Turner, 1979). In our smoking example, this could be the positive self-image generated from standing up for public health and against big tobacco, possibly to maintain consistency with prior decisions taken in the health domain or other domains (Festinger, 1957). Note that, in this example, the characteristics of the targets such as heterogeneity and psychological distance could also influence evaluations and subsequent decisions, as an agent’s ability to effectively anticipate other targets’ emotions has been shown to be influenced by these characteristics (Schroeder et al., 2017).

4. Initial Evidence

To provide initial evidence on *affective paternalism*, including its magnitude, we took the recent example of Covid-19 as an application. We chose Covid-19 for three main reasons. First, and foremost, policymaking during Covid-19 times naturally required many paternalistic decisions. Second, Covid-19 presents a collective action problem that requires balancing benefits and costs to different groups. This reflects the reality in many contexts surrounding paternalistic decision-making. Third, using Covid-19 also limits potential confounding variables: it allows us to focus on a novel, immediate, one-off crisis in which the welfare-maximising choice was (and is) not *ex-ante* clear.

We conducted two pilot online experiments in which we asked UK participants to make decisions on behalf of others to improve their welfare and that of their community as a whole. In particular, we asked our paternalistic agents to imagine that another global pandemic – similar to Covid-19 – were to occur, with a similar risk profile (i.e. a low risk of death for the young, a medium risk for the middle-aged, and a high risk for the elderly). This new pandemic would include similar restrictions to personal freedoms as Covid-19 for two years while a vaccine was being developed. We then asked our agents to choose whether or not to prescribe a pill which came with potential side effects:

- If they chose not to prescribe the pill, they and everyone in their community would have restrictions guaranteed for two years during the new pandemic.
- If they chose to prescribe the pill, they and everyone in their community were guaranteed to live *without* restrictions in these two years, but the pill would come with a risk that either they or others in their community might die or suffer from long-term consequences (similar to long Covid) as a consequence of the side effects of the pill.

The agents then played standard gambles, which is a common method in health economics (cf. Drummond et al., 1987; Dolan et al., 1996) to elicit the utility of health interventions (here: a pill). In particular, they had to decide, for different risk levels of side effects ranging from 50% to 0.1%, whether (or not) to prescribe the pill, for themselves (one gamble) and for three other age groups (three separate gambles), which mimicked the risk profile of Covid-19, namely: the young (less than 35 years of age), the middle-aged (between 35 and 59), and the elderly (above 60). For example, the prompt of the gamble regarding the self was: *“For each of the choices below, please choose whether you would (A) have 2 years of guaranteed restrictions or (B) prescribe the pill if it were guaranteed to avoid restrictions for you and everyone in your community but had the following risks that you might die as a consequence of the side effects of the pill.”* The prompt regarding the elderly was: *“Now, instead of yourself, please choose when to prescribe the pill for people above 60 years”*. The point at which agents, on average, switched from A to B yields the average risk level prescribed for the self and for the different age groups. This point is the outcome in our analysis.

Although hypothetical, these choices closely resemble the real-life trade-offs that policymakers had to make during Covid-19: whether to restrict personal freedoms for everyone by imposing lockdowns (or restricting life in other ways, for example by shutting down parts of the economy such as culture or tourism) or to avoid restrictions at the risk of potentially serious health consequences, which is heterogeneously distributed amongst the population. Participants were told to imagine and immerse themselves in the scenario, and were given a lot of descriptive information about the situation to make it appear realistic and complex. There was no obvious optimal course of action, as in reality.

Importantly, after playing these standard gambles, participants were asked about their motivations behind their choices. For example, for people above 60 years, they could select, besides an “other” and a free text option:

1. “I think those above 60 would choose this” (*weak paternalism* motivation, i.e. the agent satisfies the preferences of targets, hereafter labelled “Would”)
2. “I think those over 60 should choose this” (*strong paternalism* motivation, i.e. the agent projects ideal preferences onto targets, hereafter labelled “Should”)
3. “It is what I would choose for myself” (*strong paternalism* motivation, i.e. the agent projects own preferences onto targets, hereafter labelled “Myself”)
4. “I feel the least uneasy by choosing this” (*affective paternalism* motivation, i.e. the agent’s choice for targets is motivated by integral emotions elicited by the prompt to make a choice, hereafter labelled “Feel”)

We ran two versions of this study. In Experiment 1, which had a sample of 164 UK participants, we did not include any manipulation, and let paternalistic agents simply make their choices, i.e. prescribe the pill at different risk levels of side effects for the self and for others by age group, after which they stated their motivations behind their choices. In Experiment 2, which had a sample of 915 UK participants, we randomised agents into either a control condition or two mood induction treatments, one of which elicited incidental *happiness*, the other incidental *sadness*, using autobiographical recall as a proven induction procedure (cf. Jallais & Gilet, 2010; Siedlecka & Denson, 2019). Thereafter, we let them again make their choices. In both Experiment 1 and 2, our outcome is the risk level prescribed for the self and for others by age group, respectively, i.e. the risk level (9 categories including

50%, 40%, 30%, 20%, 10%, 5%, 3%, 1%, and 0.1%) at which the participant switched from (A) not prescribing the pill and having two years of guaranteed restrictions to (B) prescribing the pill and having no restrictions for themselves and for everyone in their community. See the Appendix for a detailed description of the data and methods used in Experiments 1 and 2. Figures 4a and 4b show our findings from Experiment 1.

Figure 4a: Extent of Affective Paternalism

Notes: Raw means of stated motivations behind choices, excluding choice for “Self” to keep scenario strictly paternalistic. See Appendix Experiment 1 for a detailed description of the data and methods used in Experiment 1. Confidence bands are 95%.

Source: N = 164, own calculations.

Figure 4a plots raw means of stated motivations behind choices. Our first observation is that a non-trivial share of participants stated to be motivated to choose the option (i.e. prescribe the risk level) for others that he or she “feels the least uneasy” with, which we take as evidence for an integral emotion elicited by the prompt to make a choice and hence as first evidence for *affective paternalism*. In fact, about 28% of participants stated to be motivated by *affective paternalism* (“Feel”), the second highest share after own-preferences projection (the first

strand of *strong paternalism*, i.e. “Myself”, about 41%) and significantly higher ($p < 0.05$) than ideal-preferences projection (the second strand, i.e. “Should”, about 18%) or *weak paternalism* (target-preferences satisfaction, i.e. “Would”, about 7%).

Figure 4b: Systematically Different Choices Under (*Integral Emotions*) Affective Paternalism

Notes: Outcome is risk level (9 categories including 50%, 40%, 30%, 20%, 10%, 5%, 3%, 1%, and 0.1%) at which participant switched from (A) not prescribing pill and having two years of guaranteed restrictions to (B) prescribing pill and having no restrictions. Reference category is “Would”. Motivation “Myself” is not available in choice for “Self”. Coefficients from linear models regressing prescribed risk level for the self and for the young, middle-aged, and elderly on stated motivations for choice controlling for age dummies, gender, dummies for level of education, current life evaluation, Death Anxiety Scale, and thoughts about own death. See Appendix Experiment 1 for a detailed description of the data and methods used in Experiment 1, including an alternative model (ordered logit with odds ratios). Confidence bands are 95%. Source: N = 164, own calculations.

Importantly, if participants stated to be motivated by *affective paternalism*, they made choices that were systematically different than those made by participants who stated to be motivated by *weak paternalism* and, to some extent, *strong paternalism*. This can be seen in Figure 4b, which plots coefficients from linear models regressing the prescribed risk level for the self

and for others by stated motivations, the reference category being “Would”. Participants motivated by *affective paternalism* (“Feel”) prescribed significantly ($p < 0.05$) less risk for the young and for the middle-aged (about 1.5 and 1.4 categories lower, respectively) compared to participants motivated by *weak paternalism* (“Would”). For these age groups, the coefficients between *affective paternalism* (“Feel”) and *strong paternalism* (ideal-preferences projection, i.e. “Should”) are likewise significantly different ($p < 0.05$).

Figure 4b: Systematically Different Choices Under (*Incidental Emotions*) Affective Paternalism

Notes: Outcome is risk level (9 categories including 50%, 40%, 30%, 20%, 10%, 5%, 3%, 1%, and 0.1%) at which participant switched from (A) not prescribing pill and having two years of guaranteed restrictions to (B) prescribing pill and having no restrictions. Reference category is neutral condition. Motivations are not available in Experiment 2. Coefficients from linear models regressing prescribed risk level for the self and for the young and the middle-aged on stated motivations for choice controlling for age dummies, gender, dummies for level of education, current life evaluation, and experimental group allocation (i.e. neutral, incidental happiness, or incidental sadness). Results are stable regardless of whether controls are included or not. See Appendix Experiment 1 for a detailed description of the data and methods used in Experiment 2, including an alternative model (ordered logit with odds ratios). Confidence bands are 95%.
Source: N = 915, own calculations.

While Experiment 1 examined the extent of *affective paternalism* and systematic deviations in the context of integral emotions, Experiment 2 elicited incidental emotions and estimated their causal effect on paternalistic choices made. As Figure 5 shows, participants who were experimentally manipulated to be incidentally *sad* prescribed the pill at significantly ($p < 0.05$) higher risk levels for the self and for the elderly compared to those in the neutral condition (the latter just make the 5% threshold). This effect did not appear for those who were manipulated to be incidentally *happy*. Furthermore, incidental sadness did not differentiate between self and others, suggesting that incidental and integral emotions might affect paternalistic decision-making in different ways. Note that Experiment 2 included only two categories of others, i.e. the young and the elderly, not the middle-aged.

5. Future Directions

The present paper has provided theoretical grounds and initial evidence for *affective paternalism*. Our findings from online experiments in the UK show that a significant share of participants reported to be motivated by affective reasons. Moreover, these participants made *different* choices for others than those motivated by cognitive reasons, and so did participants in different affective states compared to those in the neutral state. Although this is only initial evidence, it nevertheless suggests that affect may play a large role in paternalistic decision-making and may cause systematic variance (or noise) in the interventions implemented.

While our findings hinted at the importance of *affective paternalism*, Experiment 1 did not allow us to disentangle the different causes of the integral emotions that may cause it. Instead, we only saw a net effect, in that participants reported to be primarily motivated by what they feel as opposed to what they think. Of course, there may be issues of reporting bias, but none of the options given to participants to choose from was clearly more socially

desirable than another. Future research should seek to replicate our initial findings across different domains of paternalistic decisions, ideally replaying self-reports with behavioural outcomes or other, more objective measures. Further, research should aim at disentangling these integral emotions – both what information they are based on (i.e. characteristics of the agent, options, or targets, or predictions of outcomes) and what emotions are triggered (e.g. anger, sadness, or disgust, etc.), to unpack their relative importance. In Experiment 2, we provided initial evidence on the importance of *incidental* influences on paternalistic decisions. Future research should seek to replicate our findings using both revealed and stated behavioural data in a wider variety of contexts to understand the implications.

To the extent that *affective paternalism* may result in inefficient or unfair consequences, our framework suggests entry points on where to intervene, for example via emotion regulation techniques (e.g. process modification, cf. Gross, 2015; or affect labelling, cf. Torre & Lieberman, 2018), choice architecture (e.g. mandated delay between deliberation and decision, cf. Gneezy et al., 2014), or averaging and other noise reduction techniques (Kahneman, 2021). Future research should study the impact of such interventions on the ability to standardise an agent’s paternalistic decisions. This would allow equality and consistency for targets influenced by these interventions.

What is less clear is whether *affective paternalism* necessarily leads to suboptimal welfare consequences. In our experiments, the optimal course of action was not *ex-ante* clear nor *ex-post* verifiable (as is often the case in reality). For example, there may be good reasons to be cautious when making choices for others that can be very consequential for them, e.g. expose them to higher risk of death. In contrast, in situations that are less consequential, the welfare-maximising outcome may be more straightforward. In such situations, the role of affect may also be smaller, because the context of paternalistic decision-making may be less

complex or because the difference between affective states of agents in different outcomes may be lower. Future research should study the impacts of affect in paternalistic decision-making on the long-term wellbeing of those affected by the decisions. We hope that our paper provides sufficient motivation and appetite for a better understanding of the causes and consequences of affect playing a prominent role in paternalism.

Author statement and acknowledgements

Paul Dolan: Review & editing, supervision, concept, resources, and funding acquisition.

Chris Krekel: Original draft, concept, methods, investigation, visualization, supervision,

project administration *Sarah Swanke:* Original draft, concept, methods, investigation, formal analysis, data curation

We are grateful to seminar participants at the London School of Economics for very helpful comments and suggestions.

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Appendix

Experiment 1: Effect of Integral Emotions on Paternalistic Decision-Making

Participants. 196 participants were recruited using the online platform Prolific and invited to complete an online survey on Qualtrics. They were paid GBP 8 per hour of their time. The survey took about 15 minutes to complete. The recruitment pool was restricted to participants living in the UK. Table A.1.1 shows summary statistics of our estimation sample in Experiment 1.

Table A.1.1: Summary Statistics for Experiment 1

Variable	Mean	SD	Min	Max	N
<i>Outcomes</i>					
Risk Prescribed for: Self	3.0366	2.4988	0	9	164
Young	2.4939	2.2525	0	9	164
Middle-Aged	2.6159	2.2054	0	9	164
Elderly	2.8232	2.1902	0	9	164
Stated Motivation for Self: "Would"	0.4390	0.4978	0	1	164
"Should"	0.2317	0.4232	0	1	164
"Myself"	0.2378	0.4270	0	1	164
"Feel"	0.0915	0.2891	0	1	164
Stated Motivation for Young: "Would"	0.1585	0.3664	0	1	164
"Should"	0.1951	0.3975	0	1	164
"Myself"	0.3963	0.4906	0	1	164
"Feel"	0.1890	0.3927	0	1	164
"Other"	0.0610	0.2400	0	1	164
Stated Motivation for Middle-Aged: "Would"	0.2012	0.4021	0	1	164
"Should"	0.1768	0.3827	0	1	164
"Myself"	0.3659	0.4831	0	1	164
"Feel"	0.2012	0.4021	0	1	164
"Other"	0.0549	0.2284	0	1	164
Stated Motivation for Elderly: "Would"	0.1768	0.3827	0	1	164
"Should"	0.2134	0.4110	0	1	164
"Myself"	0.3171	0.4668	0	1	164
"Feel"	0.2317	0.4232	0	1	164
"Other"	0.0610	0.2400	0	1	164
<i>Controls</i>					
Age: Under 20	0.0976	0.2976	0	1	164

20 to 24	0.3598	0.4814	0	1	164
25 to 29	0.2561	0.4378	0	1	164
30 to 34	0.0976	0.2976	0	1	164
35 to 39	0.0610	0.2400	0	1	164
40 to 44	0.0366	0.1883	0	1	164
45 to 49	0.0305	0.1725	0	1	164
50 to 54	0.0122	0.1101	0	1	164
55 to 59	0.0122	0.1101	0	1	164
60 to 64	0.0305	0.1725	0	1	164
65 to 69	0.0061	0.0781	0	1	164
Gender: Male	0.2561	0.4378	0	1	164
Female	0.7073	0.4564	0	1	164
Non-Binary	0.0061	0.0781	0	1	164
Prefer Not to Say	0.0305	0.1725	0	1	164
Education: Primary School	0.0061	0.0781	0	1	164
Lower Secondary School	0.0061	0.0781	0	1	164
Higher Secondary School	0.2378	0.4270	0	1	164
College or University	0.3902	0.4893	0	1	164
Post-Graduate Degree	0.3537	0.4796	0	1	164
Prefer Not to Say	0.0061	0.0781	0	1	164
Life Evaluation	5.9939	1.5289	0	10	164
Mortality Salience Manipulation	0.5122	0.5014	0	1	164
Death Anxiety Scale	27.9939	5.9233	0	1	164
Thoughts About Own Death: Always	0.0732	0.2612	0	1	164
Often	0.3293	0.4714	0	1	164
Sometimes	0.4146	0.4942	0	1	164
Rarely	0.1524	0.3605	0	1	164
Never	0.0305	0.1725	0	1	164

Procedure. Participants were first shown a consent form that gave a broad outline of the study without describing any details to avoid selection and framing. The study was described as: “We are interested in understanding public preferences related to health trade-offs.” The aim of the study was to pilot the effectiveness of an online mortality salience manipulation, and as a pilot, was not preregistered.

After answering basic demographic and attitudinal questions, including age, gender, education, general life evaluation, and perceived burden of Covid-19 restrictions and motivation to comply with them, participants were randomly allocated into two groups: the

first group was exposed to a mortality salience prime, the second to a neutral prime. Both primes followed the literature and adopted the standard mortality salience manipulation (i.e. asking participants to write down feelings that come to mind when thinking about their own death and the process of dying as opposed to the feelings and process of watching television, cf. Burke et al., 2010). The mortality salience manipulation failed to deliver the expected result (as evidenced by insignificant impacts on the Death Anxiety Scale, cf. Templer, 1970, and questions related to thoughts about own death). We thus combined both groups in our estimation sample, while still controlling for group allocation, the Death Anxiety Scale, and thoughts about own death to net out any residual priming in our subsequent regressions.

After the mortality salience manipulation, participants were presented with the questions this paper is primarily concerned with: first, they were given a brief description of a future pandemic similar to Covid-19, including different risks of death to different age groups (i.e. the young, the middle-aged, and the elderly) and two policy options. These options were:

- a) To prescribe a pill with a particular risk of death for a particular age group as a side effect of taking the pill, in order to avoid restrictions for participants themselves and for everyone else in their community.
- b) To *not* prescribe the pill but have these restrictions for participants themselves and for everyone else in their community guaranteed for two years.

After a short check whether participants understood the scenario and a short behavioural measure (i.e. click-able links to “expert opinions”, which, however, did not work, on purpose), they were given four standard gambles they had to play, one concerning themselves and three concerning the different age groups (i.e. the young, the middle-aged, and the

elderly). In particular, these gambles included making the above choice for varying levels of risk of taking the pill. Finally, participants were asked about their motivations behind their choices, including *weak*, *strong*, and *affective paternalistic motivations*. Examples of the standard gambles for self and for the elderly, including self-reported motivations, are given below.

Example 1.1: Standard Gamble for the Self

For each of the choices below, please choose whether you would (A) have 2 years of guaranteed restrictions or (B) prescribe the pill if it were guaranteed to avoid restrictions for **you and everyone in your community** but had the following risks that **you might die** as a

consequence of the side effects of the pill.

	Have 2 years of guaranteed restrictions (0)	Prescribe the pill and have no restrictions (1)
Pill with a 50% risk death for you	☐	☐
Pill with a 40% risk	☐	☐
30% risk	☐	☐
20% risk	☐	☐
10% risk	☐	☐
5% risk	☐	☐
3% risk	☐	☐
1% risk	☐	☐
0.1% risk	☐	☐

Example 1.2: Standard Gamble for the Elderly

Now, instead of yourself, please choose when to prescribe the pill for **people above 60 years**:

	Have 2 years of guaranteed restrictions (0)	Prescribe the pill and have no restrictions (1)
Pill with a 50% risk of death for people above 60 years	☐	☐
Pill with a 40% risk	☐	☐
30% risk	☐	☐
20% risk	☐	☐
10% risk	☐	☐
5% risk	☐	☐
3% risk	☐	☐
1% risk	☐	☐
0.1% risk	☐	☐

Our outcome is the risk level prescribed for the self and for others by age group, respectively, i.e. the risk level (9 categories including 50%, 40%, 30%, 20%, 10%, 5%, 3%, 1%, and 0.1%) at which the participant switched from (A) not prescribing the pill and having two years of guaranteed restrictions to (B) prescribing the pill and having no restrictions for themselves and for everyone in their community.

The survey ended with a seriousness check and a debriefing, including the possibility to withdraw from the study *ex-post*.

Analysis. For each choice (for self and for the different age groups), we employed simple linear regressions and regressed the prescribed risk level of the pill on participants' self-reported motivations, controlling for age, gender, education, and general life evaluation, as well as for a dummy capturing whether participants had been exposed to the mortality salience prime, the Death Anxiety Scale, and thoughts about own death, to net out any remaining contamination from the mortality salience manipulation. In doing so, we obtained the following results, whereby the coefficients of participants' self-reported motivations are shown in Figure 4b in the main paper (omitting "It is what I would choose for myself" for brevity and better comparability between Experiments 1 and 2).

Table A.1.2: Regression Table for Figure 4b

<i>Linear Model</i>	Risk Level Prescribed for			
	Self (1)	Young (2)	Middle-Aged (3)	Elderly (2)
Stated Motivation: "Would"		<i>Reference Category</i>		
"Should"	1.098** (0.519)	-0.070 (0.616)	0.194 (0.562)	0.776 (0.560)
"Myself"		-0.823 (0.542)	-0.809 (0.490)	0.185 (0.518)
"Feel"	0.617 (0.518)	-1.531** (0.635)	-1.351** (0.563)	-0.166 (0.554)
Other	1.800** (0.735)	-1.538* (0.832)	-1.268 (0.824)	-0.637 (0.815)
<i>Controls</i>				
Age: Under 20		<i>Reference Category</i>		
20 to 24	-0.698 (0.795)	-1.299* (0.695)	-0.768 (0.679)	-0.209 (0.684)
25 to 29	-1.530 (0.929)	-1.075 (0.819)	-0.643 (0.803)	-0.784 (0.805)
30 to 34	-1.958* (1.047)	-1.640* (0.928)	-0.488 (0.913)	-0.289 (0.914)

35 to 39	-0.000 (1.225)	-0.128 (1.069)	1.052 (1.047)	1.447 (1.055)
40 to 44	-1.707 (1.302)	-2.494** (1.157)	-1.874 (1.138)	-1.139 (1.143)
45 to 49	0.628 (1.387)	1.787 (1.252)	1.312 (1.218)	1.600 (1.217)
50 to 54	-3.395* (1.896)	-2.281 (1.678)	-1.833 (1.647)	-2.249 (1.648)
55 to 59	-3.591* (2.111)	-3.565* (1.871)	-3.134* (1.845)	-2.579 (1.854)
60 to 64	-1.017 (1.352)	0.652 (1.199)	0.925 (1.173)	0.507 (1.176)
65 to 69	1.181 (2.570)	0.698 (2.299)	2.410 (2.251)	1.884 (2.251)
Gender: Male		<i>Reference Category</i>		
Female	0.070 (0.463)	0.128 (0.409)	0.155 (0.401)	0.048 (0.406)
Non-Binary	0.693 (2.639)	2.205 (2.340)	1.485 (2.297)	0.447 (2.296)
Prefer Not to Say	1.003 (1.486)	1.457 (1.313)	1.192 (1.297)	0.669 (1.294)
Education: Primary School		<i>Reference Category</i>		
Lower Secondary School	-0.944 (3.631)	-2.541 (3.203)	-3.059 (3.189)	-1.436 (3.164)
Higher Secondary School	-5.916** (2.603)	-6.236*** (2.252)	-7.008*** (2.237)	-6.183*** (2.229)
College or University	-5.107* (2.649)	-5.819** (2.307)	-6.712*** (2.292)	-5.352** (2.282)
Post-Graduate Degree	-5.726** (2.678)	-6.321*** (2.335)	-7.377*** (2.317)	-6.229*** (2.310)
Prefer Not to Say	-9.935** (3.918)	-8.942*** (3.406)	-9.639*** (3.305)	-8.958*** (3.361)
Live Evaluation	-0.161 (0.141)	-0.015 (0.126)	0.027 (0.123)	0.097 (0.125)
Mortality Salience Manipulation	-0.273 (0.407)	0.204 (0.360)	0.063 (0.353)	0.142 (0.355)
Death Anxiety Scale	-0.053 (0.036)	0.009 (0.032)	0.008 (0.031)	0.008 (0.032)
Thinking About Own Death: Always		<i>Reference Category</i>		
Often	-0.941 (0.829)	-0.891 (0.728)	-1.082 (0.717)	-0.277 (0.720)
Sometimes	-0.474 (0.808)	-0.775 (0.718)	-0.928 (0.702)	-0.288 (0.704)
Rarely	-0.063 (0.922)	-1.232 (0.809)	-1.146 (0.789)	-0.357 (0.792)

Never	0.978 (1.361)	0.287 (1.223)	-0.354 (1.210)	0.931 (1.195)
Constant	11.938*** (2.978)	10.662*** (2.644)	11.011*** (2.611)	8.038*** (2.674)
Observations	164	164	164	164
R Squared	0.244	0.280	0.274	0.257

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Alternative Specification: Ordered Logit Model, Odds Ratios

<i>Ordered Logit Model Odds Ratios</i>	Risk Level Prescribed for			
	Self (1)	Young (2)	Middle-Aged (3)	Elderly (2)
<i>Reference Category</i>				
Stated Motivation: "Would"				
"Should"	0.815** (0.401)	-0.038 (0.535)	-0.046 (0.479)	0.528 (0.488)
"Myself"		-0.661 (0.488)	-0.992** (0.445)	0.157 (0.447)
"Feel"	0.524 (0.397)	-1.698*** (0.559)	-1.838*** (0.512)	-0.344 (0.485)
Other	1.406*** (0.542)	-1.737** (0.719)	-1.662** (0.753)	-0.697 (0.710)
<i>Controls</i>				
Under 20				
Aged 20 to 24	-0.604 (0.588)	-1.195** (0.562)	-0.825 (0.574)	-0.105 (0.588)
Aged 25 to 29	-1.317* (0.693)	-1.250* (0.669)	-0.836 (0.665)	-0.696 (0.678)
Aged 30 to 34	-1.650** (0.804)	-2.115** (0.828)	-0.883 (0.830)	-0.452 (0.809)
Aged 35 to 39	-0.342 (0.955)	-0.250 (0.905)	0.698 (0.955)	1.164 (0.901)
Aged 40 to 44	-1.479 (0.931)	-2.566*** (0.996)	-2.266** (1.003)	-1.247 (1.067)
Aged 45 to 49	0.331 (0.994)	2.192** (1.087)	1.576 (1.091)	1.649 (1.105)
Aged 50 to 54	-3.066* (1.593)	-2.756* (1.453)	-2.312 (1.431)	-2.559* (1.450)
Aged 55 to 59	-2.719* (1.586)	-17.715 (1,070.410)	-16.239 (667.838)	-2.208 (1.607)
Aged 60 to 64	-0.785	0.608	1.019	0.525

	(0.987)	(0.989)	(0.973)	(1.045)
Aged 65 to 69	0.860	0.364	2.425	1.729
	(1.613)	(1.617)	(1.635)	(1.623)
Male	<i>Reference Category</i>			
Female	0.102	0.259	0.295	0.168
	(0.347)	(0.346)	(0.347)	(0.357)
Non-Binary	0.906	2.329	1.922	0.764
	(1.708)	(1.691)	(1.720)	(1.657)
Prefer Not to Say	-0.132	1.379	0.992	-0.208
	(1.198)	(1.198)	(1.232)	(1.205)
Primary School	<i>Reference Category</i>			
Lower Secondary School	-27.981	-31.659	-38.386	-51.461
	(1344541.274)	(4679677.447)	(4194577.054)	(4990290.797)
Higher Secondary School	-31.396	-35.274	-42.195	-55.450
	(1344541.274)	(4679677.447)	(4194577.054)	(4990290.797)
College or University	-30.913	-34.910	-41.889	-54.677
	(1344541.274)	(4679677.447)	(4194577.054)	(4990290.797)
Post-Graduate Degree	-31.353	-35.506	-42.523	-55.448
	(1344541.274)	(4679677.447)	(4194577.054)	(4990290.797)
Prefer Not to Say	-45.662	-52.193	-57.519	-71.605
	(1344541.376)	(4679677.755)	(4194577.167)	(4990291.114)
Live Evaluation	-0.169	-0.092	-0.030	0.035
	(0.111)	(0.109)	(0.110)	(0.108)
Mortality Salience Manipulation	-0.345	0.110	0.066	0.009
	(0.306)	(0.320)	(0.309)	(0.302)
Death Anxiety Scale	-0.050*	-0.002	-0.003	0.005
	(0.030)	(0.028)	(0.028)	(0.028)
Thinking About Own Death: Always	<i>Reference Category</i>			
Often	-0.474	-0.723	-1.144*	-0.119
	(0.635)	(0.651)	(0.625)	(0.662)
Sometimes	-0.387	-0.753	-1.157*	-0.205
	(0.637)	(0.664)	(0.645)	(0.664)
Rarely	-0.062	-1.163	-1.327*	-0.250
	(0.735)	(0.730)	(0.706)	(0.741)
Never	0.799	0.437	-0.260	0.869
	(1.059)	(1.120)	(1.098)	(1.032)
Observations	164	164	164	164
Pseudo R Squared	0.069	0.104	0.098	0.074

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

The complete survey of Experiment 1 can be found in the Supplementary Materials.

Experiment 2: Effect of Incidental Emotions on Paternalistic Decision-Making

Participants. 915 participants were recruited using the online platform Prolific and invited to complete an online survey on Qualtrics. They were paid GBP 8 per hour of their time. The survey took about 10 minutes to complete. The recruitment pool was again restricted to participants living in the UK. Table A.2.1 shows summary statistics of our estimation sample.

Table A.2.1: Summary Statistics for Experiment 2

Variable	Mean	SD	Min	Max	N
<i>Outcomes</i>					
Risk Level Prescribed for: Self	3.0623	2.357	0	8	915
Young	2.6383	2.331	0	8	915
Elderly	3.0984	2.516	0	8	915
Condition: Neutral	0.3388	0.474	0	1	915
Happiness	0.3366	0.473	0	1	915
Sadness	0.3246	0.468	0	1	915
<i>Controls</i>					
Age: Under 20	0.2328	0.4228	0	1	915
20 to 24	0.3126	0.4638	0	1	915
25 to 29	0.2262	0.4186	0	1	915
30 to 34	0.1333	0.3401	0	1	915
35 to 39	0.0656	0.2477	0	1	915
40 to 44	0.0230	0.1498	0	1	915
45 to 49	0.0055	0.0738	0	1	915
50 to 54	0.0011	0.0331	0	1	915
Gender: Male	0.3137	0.4642	0	1	915
Female	0.6776	0.4677	0	1	915
Non-Binary	0.0077	0.0872	0	1	915
Prefer Not to Say	0.0011	0.0331	0	1	915
Education: Primary School	0.0011	0.0331	0	1	915
Lower Secondary School	0.0623	0.2418	0	1	915
Higher Secondary School	0.2634	0.4407	0	1	915
College or University	0.4536	0.4981	0	1	915
Post-Graduate Degree	0.2175	0.4128	0	1	915
Prefer Not to Say	0.0022	0.0467	0	1	915
Life Evaluation	5.6306	1.6436	0	1	915

Procedure. As in Experiment 1, participants were first shown a consent form that gave a broad outline of the study without describing any details to avoid selection and framing. The study was described as: “We are interested in understanding decision-making.” The aim of the study was to pilot the effectiveness of an online mood manipulation, and as a pilot, was not preregistered.

After again answering basic demographic and attitudinal questions, including age, gender, education, general life evaluation, and perceived risk of catching Covid-19 and the health consequences thereof, participants were randomly allocated into three groups: the first group was exposed to a mood manipulation that triggered happiness, the second to a mood manipulation that triggered sadness, and the third to a neutral condition. Both mood manipulations (i.e. happiness, sadness) followed the literature and adopted a standard mood manipulation technique (so-called *autobiographical recall*, i.e. asking participants to write about a time in the past when they felt extremely happy, sad, or about an ordinary, neutral event, cf. Jallais & Gilet, 2010; Siedlecka & Denson, 2019). They were then asked several hypothetical questions about their Covid-19 compliance behaviour (i.e. about their willingness to give up social distancing, face-mask wearing, and their willingness to spend more time under strict lockdown conditions, if deemed necessary). These questions were the original purpose of this pilot.

After these questions, participants were presented with the same questions as in Experiment 1, i.e. after a short description of the new pandemic, including the different risks of death to the different age groups and the two policy options, they were again asked to play standard gambles, making choices of prescribing (or not) the pill at varying risk levels for

themselves and for the different age groups, yet without asking about their motivations behind their choices. See Experiment 1 above for details.

A noticeable difference between Experiments 1 and 2 is that Experiment 2 did *not* include the middle-aged as a separate age group (as it was merely meant as a proof-of-concept). It also ended slightly different: the standard gambles were followed by equivalent time-trade-offs (which we omit for comparability between Experiments 1 and 2) and some more demographic questions (i.e. health, smoking status, income, and rural or urban residence). Our outcome is the risk level prescribed for the self and for others by age group, respectively, i.e. the risk level (9 categories including 50%, 40%, 30%, 20%, 10%, 5%, 3%, 1%, and 0.1%) at which the participant switched from (A) not prescribing the pill and having two years of guaranteed restrictions to (B) prescribing the pill and having no restrictions for themselves and for everyone in their community.

The survey then finished with a seriousness check and a behavioural outcome, prompting participants to click on a link for further Covid-19 information (which almost no participant did).

Analysis. For each choice (for self and for the different age groups), we again employed simple linear regressions and regressed the prescribed risk level of the pill on participants' experimental group allocation, i.e. whether they were in the happiness, sad, or neutral condition, controlling for age, gender, education, and general life evaluation. In doing so, we obtained the following results, whereby the coefficients of participants' group allocation are shown in Figure 5 in the main paper.

Table A.2.2: Regression Table for Figure 5

<i>Linear Model</i>	Risk Level Prescribed for		
	Self (1)	Young (2)	Elderly (3)
Condition: Neutral	<i>Reference Category</i>		
Happiness	0.078 (0.186)	-0.249 (0.186)	0.043 (0.202)
Sadness	0.467** (0.191)	0.199 (0.192)	0.408** (0.202)
Age: Under 20	<i>Reference Category</i>		
20 to 24	-0.188 (0.224)	-0.185 (0.232)	-0.252 (0.254)
25 to 29	-0.461* (0.244)	-0.184 (0.248)	-0.390 (0.266)
30 to 34	-0.567** (0.274)	-0.522* (0.267)	-0.783*** (0.289)
35 to 39	-0.201 (0.306)	-0.029 (0.323)	-0.188 (0.342)
40 to 44	0.612 (0.556)	-0.270 (0.502)	0.447 (0.574)
45 to 49	1.498 (1.064)	1.216 (1.199)	0.746 (1.269)
Prefer Not to Say	4.198*** (0.299)	4.870*** (0.310)	3.876*** (0.337)
Gender: Male	<i>Reference Category</i>		
Female	0.250 (0.169)	0.276* (0.167)	-0.114 (0.183)
Non-Binary	1.946* (1.179)	1.242 (1.131)	0.925 (1.070)
Education: Primary School	<i>Reference Category</i>		
Lower Secondary School	3.931*** (0.415)	3.356*** (0.410)	3.604*** (0.440)
Higher Secondary School	3.946*** (0.302)	3.154*** (0.302)	3.614*** (0.334)
College or University	3.790*** (0.273)	3.207*** (0.274)	3.621*** (0.300)
Post-Graduate Degree	3.780*** (0.318)	3.004*** (0.309)	3.478*** (0.341)
Prefer Not to Say	5.528*** (2.047)	5.313** (2.139)	5.199*** (1.906)
Life Evaluation	-0.106** (0.050)	-0.067 (0.051)	-0.071 (0.055)
Constant	-0.318 (0.357)	-0.156 (0.360)	0.100 (0.382)

Observations	915	915	915
R Squared	0.042	0.029	0.028

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Alternative Specification: Ordered Logit Model, Odds Ratios

<i>Ordered Logit Model</i> <i>Odds Ratios</i>	Risk Level Prescribed for		
	Self (1)	Young (2)	Elderly (3)
Condition: Neutral	<i>Reference Category</i>		
Happiness	0.045 (0.142)	-0.188 (0.143)	-0.015 (0.144)
Sadness	0.337** (0.145)	0.163 (0.147)	0.268* (0.141)
Under 20	<i>Reference Category</i>		
Aged 20 to 24	-0.129 (0.170)	-0.119 (0.176)	-0.178 (0.182)
Aged 25 to 29	-0.372** (0.185)	-0.138 (0.189)	-0.286 (0.190)
Aged 30 to 34	-0.471** (0.205)	-0.363* (0.206)	-0.524** (0.205)
Aged 35 to 39	-0.032 (0.218)	0.081 (0.229)	-0.055 (0.220)
Aged 40 to 44	0.437 (0.381)	-0.142 (0.352)	0.298 (0.370)
Aged 45 to 49	1.040 (0.782)	0.939 (0.874)	0.496 (0.910)
Prefer Not to Say	2.563*** (0.255)	3.054*** (0.266)	2.135*** (0.257)
Male	<i>Reference Category</i>		
Female	0.226* (0.129)	0.221* (0.129)	-0.080 (0.130)
Non-Binary	1.715 (1.333)	0.895 (0.988)	0.682 (0.824)
Primary School	<i>Reference Category</i>		
Lower Secondary School	15.167*** (0.902)	13.689*** (1.051)	14.037*** (1.113)
Higher Secondary School	15.242*** (0.860)	13.556*** (1.028)	14.056*** (1.094)
College or University	15.105***	13.596***	14.091***

	(0.856)	(1.020)	(1.091)
Post-Graduate Degree	15.105***	13.475***	14.003***
	(0.863)	(1.025)	(1.091)
Prefer Not to Say	16.387***	15.225***	15.264***
	(2.497)	(2.682)	(2.131)
Life Evaluation	-0.078*	-0.035	-0.037
	(0.040)	(0.040)	(0.041)
Observations	915	915	915
PseudoRSquared	0.011	0.007	0.007

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

The complete survey of Experiment 2 can be found in the Supplementary Materials.