

Moral Dynamics In Everyday Life: How Does Morality Evolve In Time?

Albert Barque-Duran, Emmanuel M. Pothos, James M. Yearsley & James A. Hampton

Department of Psychology, City University London
London, EC1V 0HB UK
albert.barque-duran@city.ac.uk

Abstract

Recent research on moral dynamics (the processes and phenomena –collective or individual– by which moral behavior and moral attitudes emerge, evolve, spread, erode or disappear) shows that an individual’s ethical mind-set (i.e., outcome-based vs. rule-based) moderates the impact of an initial ethical or unethical act regarding the likelihood of behaving ethically on a subsequent occasion. More specifically, an outcome-based mind-set facilitates Moral Balancing (behaving ethically or unethically decreases the likelihood of engaging in the same type of behavior later), whereas a rule-based mind-set facilitates Moral Consistency (engaging in an ethical or unethical behavior increases the likelihood of engaging in the same type of behavior later). Our objective was to look at the evolution of moral choice across a series of scenarios and so explore if these moral patterns (Balancing vs. Consistency) are maintained over time. The results of three studies showed that Moral Balancing is not maintained over time. On the other hand, Moral Consistency could be maintained over time, if the mind-set was reinforced before making a new moral judgment (but not otherwise).

Keywords: Prosocial Choices; Moral Behavior; Ethical Mind-sets; Ethical Behavior; Decision Making.

Introduction

How do individuals deal with the ethical uncertainty in their lives? People are confronted with a vast amount of moral dilemmas to resolve, such as donating to charities, volunteering, recycling, buying fair trade products, or donating blood. People have to regulate their moral self-image while pursuing self-interest. Studies on moral self-regulation have convincingly demonstrated that one’s recent behavioral history is an important factor in shaping one’s current moral conduct (Monin & Jordan, 2009) and two different effects have been reported: Moral Balancing and Moral Consistency.

Moral Balancing (Nisan, 1991) suggests that engaging in an ethical or unethical behavior at one point in time reduces the likelihood of engaging in that form of behavior again in a subsequent situation (e.g., Merritt, Effron, & Monin, 2010). To explain this type of behavior, it has been argued that individuals tune their actions in such a way that their moral self-image (which represents individuals’ moment-to-moment perception of their degree of morality) fluctuates around a moral-aspiration level or equilibrium (e.g., Jordan, Mullen, & Murnighan, 2011). Ethical and unethical acts respectively elevate and depress the moral self-image.

Moral balancing researchers argue that when the moral self-image exceeds the moral-aspiration level, the individual feels “licensed” to engage in more self-interested, immoral, or antisocial behavior (moral licensing). When the moral self-image is below that level, people tend to experience emotional distress (Higgins, 1987) and become motivated to enact some corrective behavior (i.e., moral compensation). In contrast to Moral Balancing, Moral Consistency (e.g., Thomas & Batson, 1981) suggests that after engaging in an ethical or unethical act, individuals are more likely to behave in the same fashion later on. This pattern is explained in terms of a psychological need to maintain one’s self-concept (Aronson & Carlsmith, 1962), self-perception effects (Bem, 1972), or the use of behavioral consistency as a decision heuristic (e.g., Cialdini et al., 1995).

Cornelissen et al. (2013) considered some conditions under which each pattern of moral behavior can occur. An individual’s ethical mind-set (Outcome-based vs. Rule-based) moderates the impact of an initial ethical or unethical act on the likelihood of behaving ethically on a subsequent occasion and, thus, affects the pattern of moral behavior. The idea of ethical mind-sets comes from two frameworks on moral philosophy: consequentialism and deontology (Singer, 1991). Past work has demonstrated that this distinction is not exclusively philosophical, but that individuals consider it meaningful when reflecting on their behavior (Uhlmann et al., 2009).

A consequentialist perspective (*Outcome-based* mind-set) considers whether an act is or not morally right, depending on the consequences of that act (“because it benefitted/hurt other people”). By contrast, a deontological perspective (*Rule-based* mind-set) implies that what justifies an act is its conformity to a moral norm (“because an ethical norm or principle was followed”), i.e., principles that impose duties and obligations. An outcome-based mind-set is thought to facilitate Moral Balancing; a rule-based mind-set facilitates Moral Consistency (Cornelissen et al. 2013).

One consequence of considering the role of moral self-image in moral behavior is that it forces one to think of moral choices as a sequence, rather than in temporal isolation. Moral and immoral actions occur in the context of prior moral and immoral actions and the idea of moral self-image provides a connecting thread across these instances. All the relevant findings so far have been produced using an experimental paradigm based on a 2-stage scenario: a manipulation part and a response part. As our aim was to understand how the Moral Balancing and Moral Consistency behaviors evolve in time (we call this moral

dynamics), we used a novel experimental paradigm, involving 5 stages, based on previous successful techniques: participants received two manipulations at the beginning of the experiment: (a) one to induce them to adopt a specific mind-set (outcome-based vs. rule-based) and (b) another to recall an action of a particular morality (ethical vs. unethical). Then, they were presented with a series of moral scenarios (5 stages) that were used to measure the likelihood of engaging in a prosocial behavior. This is the first study to look at the evolution of moral choice across a series of scenarios.

Our objective was to explore the hypothesis that mind-set, Moral Balancing and Moral Consistency are maintained over time (indeed, otherwise, it would be hard to appreciate their psychological significance). We know from previous research that mind-set can influence relatively immediate moral behavior (Cornelissen et al. 2013), but it remains unknown whether mind-sets can be sustained over time and so have a persistent influence on moral behavior.

The conflicting hypotheses regarding how moral behavior evolves in time can be visualized as a sequence of moral stages. We called the ‘Zig-Zag pattern’ the idealized pattern for a Moral Balancing behavior. By analogy, we called ‘Flat pattern’ the idealized pattern for a Moral Consistency behavior. We then used these idealized patterns to motivate the analyses for the results obtained in Experiments 2 and 3. For Moral Balancing, an initial ethical manipulation (such as recall of an ethical action) at Stage 0 should be followed at the next stage by an unethical choice. However at the subsequent stage, the previous unethical choice will now promote a more ethical one. The result is a predicted oscillation between ethical and unethical choices, as the participant tries to maintain a balance. Alternatively, Moral Consistency should lead to the persistence of an initial choice, as with each Stage the participant becomes more and more entrenched in a consistent moral position, be it either ethical or unethical.

In order to study the evolution of moral tendencies and the perseverance of mind-sets we ran 2 experiments plus a pilot study. In the pilot study (Experiment 1) we identified the most suitable moral scenarios to use in the main experiments. Experiment 2 was used to replicate the results in the moral dynamics literature (Cornelissen et al., 2013; Jordan, Mullen, Murningham, 2011) and to pursue the novel question of how the tendency to behave morally evolves over time. In Experiment 3, we explored how the two possible patterns of moral dynamics evolve over time, with a reinforcing manipulation before each new moral scenario, to test if ethical mind-sets can be maintained, if reinforced.

Pilot Study – Experiment 1

The objective of the pilot study was to identify five suitable moral scenarios for the main experiments. We were looking for five moral scenarios such that they would (1) be perceived to have high levels of morality, (2) have a similar frequency of engagement (prosocial behavior) and (3) be

perceived similarly in terms of emotionality, that is, they would produce a similar affective reaction.

Participants

Twenty experimentally naïve students at City University London received course credit for participating in the study.

Materials and Procedure

The experiment, designed in Qualtrics, lasted approximately 15 minutes. Eleven novel moral scenarios were initially created. For each scenario, we tested the perceived morality of the choice of actions using a 7-point scale: -3=very immoral, 3=very moral (How moral do you think this behavior is?), and the prosocial behavior measured as the likelihood of engaging in an (un)ethical behavior on a 7-point scale: 1=very unlikely, 7=very likely; (Jordan, Mullen, et al., 2011). Participant responses on perceived morality and likelihood of engagement were the main dependent variables in our pilot. Also, we tested the perceived emotionality of the scenarios presented, measured with the (SAM) Self-Assessment Manikin (Bradley & Lang 1994). We chose the five scenarios with the highest scores in perceived morality and with similar (intermediate) scores in likelihood of engagement and perceived emotionality.

Experiment 2

The objectives here were twofold. First, we wanted to replicate the results in the moral dynamics literature, that an Outcome-based mind-set leads to Moral Balancing, whereas a Rule-based mind-set leads to Moral Consistency. The motivation to do so was to validate the experimental approach. Second, Experiment 2 employed a multi-stage procedure, so allowing us to pursue the novel question of how the tendency to behave morally evolves over time. The experiment lasted approximately 35 minutes.

Participants

A total of 200 participants, all of them US residents, were recruited on-line and received \$0.90 for doing the task.

Design and Procedure

The experiment was designed in Qualtrics and run on Amazon Mechanical Turk. Ethical mind-set (outcome-based vs. rule-based) and the ethicality of an initial recalled act (ethical vs. unethical) were both manipulated between participants. The induction of ethical mind-sets was the same as used in Cornelissen et al. (2013). To induce the appropriate mind-set, we provided instructions that defined ethicality as either a function of consequences or in terms of rule compliance, and then provided three prototypical examples. Subsequently, we asked participants to provide an example of a behavior—not necessarily their own—that was ethical or unethical, because of either its consequences or its rule compatibility (depending on condition). This

procedure aimed to induce the intended mind-set in participants, before they finally reflected on their memory of the last action with moral valence.

There were therefore four conditions: (1)Outcome-Based/Ethical recall, (2)Outcome-Based/Unethical recall, (3)Rule-Based/Ethical recall and (4)Rule-Based/Unethical recall. In the first one, our participants were instructed to think about a behavior that was ethical (“because it benefitted other people”). In the second condition, participants were instructed to think about a behaviour that was unethical (“because it hurt other people”). In the third condition, participants thought about a behavior that was ethical (“because you followed an ethical norm or principle”) and in the fourth condition, participants were instructed to think about a behavior that was unethical (“because you did not follow an ethical norm or principle”).

We used Prosocial Behavior, as in previous related work, as the dependent variable. After the manipulation (STAGE 0), participants completed a filler task before rating their likelihood of engaging in a prosocial behavior (STAGE 1) and then repeated the same procedure until STAGE 5. The order of presentation of the moral scenarios on each stage, as well as the filler tasks, were randomized for each participant.

Results and Discussion

Replication of Previous Studies.

As predicted, when given an Outcome-based mindset, the recall of an unethical act led to Moral Balancing and an increased intention to perform the moral action (Figure 1). When given a Rule-based mindset, the reverse pattern was observed. This result was confirmed in the ANOVA, which showed a significant interaction between Type of Mind-set and Type of Ethical Recall, $F(1,44) = 7.12, p < 0.01$, but no main effect of Type of Mind-set, nor of Recall, (both $F < 1$). Independent samples t-tests were employed to explore the interaction. In the outcome-based mind-set condition, participants who recalled an unethical act were more likely to engage in a prosocial behavior ($M = 4.54, SD = 1.66$), than those who recalled an ethical act ($M = 3.82, SD = 1.69$), $t(91) = -2.06, p = .04$. In other words, participants with an Outcome-based mind-set showed a Moral Balancing effect. By contrast, in the Rule-based mind-set condition, participants who recalled an ethical act were more likely to engage in a prosocial behavior ($M = 4.36, SD = 1.68$) than those who recalled an unethical act ($M = 3.6, SD = 1.74$), $t(93) = 2.14, p = .03$. In other words, these participants showed a Moral Consistency effect.

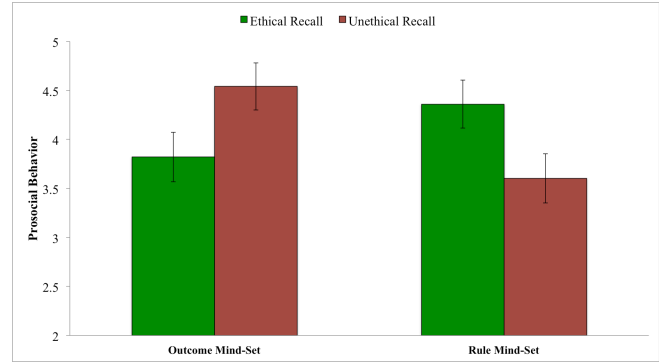
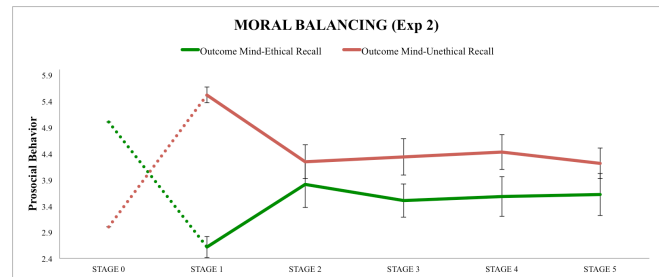


Figure 1: Mean Prosocial Behavior in STAGE 1. Error bars represent SE.

Moral Dynamics: Evidence for Moral Balancing.

We ran a mixed two-way ANOVA with Type of Ethical Recall and Stage (1-5) as independent variables. Minimally, Moral Balancing would be evidenced by no main effect of Recall, but a significant interaction between Recall and Stage. There was a main effect of Type of Ethical Recall, $F(1,25) = 13.1, p < .001$, no significant effect of stage, $F < 1$, and a significant interaction between the two factors, $F(4,100)=5.57, p < .01$. Inspection of Figure 2 makes it clear that the interaction is just a result of prosocial choice converging towards an average level by Stage 2, after which it flattens out across the two conditions of ethical recall.



2: Evolution of Prosocial Behavior (Outcome Based Mind-set) in Experiment 2. Error bars represent SE.

We then analyzed the evolution of prosocial behavior between STAGES [1-2] to see if, at least, the Moral Balancing pattern was maintained for just one more stage, apart from [0-1]. A two-way analysis of variance (ANOVA) with Type of Ethical Recall and Stage as independent variables indicated a main effect of Recall, $F(1,25)=23.2, p < .01$, and no main effect of Stage, $F(1,25) < 1$. The results also revealed a significant interaction between Type of Ethical Recall and Stage, $F(1,25) = 12.0, p = .002$. So, as above, there was little evidence for Moral Balancing.

Finally, we wanted to know whether the data at each stage showed any evidence of a residual effect of Type of Ethical Recall factor after STAGE 1. We ran an ANOVA with STAGES [2-5] and Recall as independent variables. The effect of Recall approached significance, $F(1,25) = 3.41, p = .077$, but there was no main effect of stage, $F < 1$, and no

significant interaction between the two factors, $F(3,75) < 1$. Therefore, the interaction seen in the previous analysis, STAGES [1-5], is explained by the change from STAGE 1 to STAGE 2 and disappears after that.

Overall, the results show that Moral Balancing was not observed in this experiment, beyond the initial manipulation. The conclusion is that the ‘Zig-Zag pattern’ was only observed in STAGES [0-1], but not maintained over time, in contrast to the idealized prediction. Instead, it appears that the evolution of prosocial behavior converged to a neutral level of morality (Figure 2).

Moral Dynamics: Evidence for Moral Consistency.

In Figure 3, we can see how the ‘Flat pattern’ was broadly evident between STAGES [0-1]; as noted above (Replication of Previous Studies).

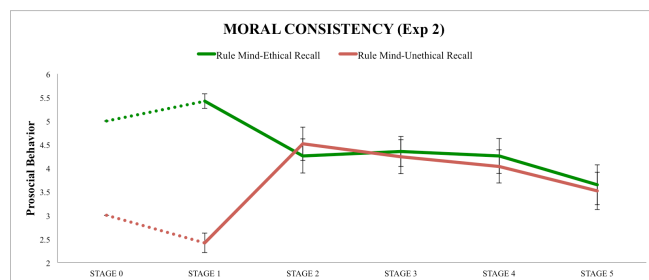


Figure 3: Evolution of Prosocial Behavior (Rule Based Mind-set) in Experiment 2. Error bars represent SE.

Regarding the evolution between STAGES [1-5], we ran a two-way analysis of variance (ANOVA) with Type of Ethical Recall and Stage on likelihood of Prosocial Behavior. Minimally, Moral Consistency would be evidenced by a main effect of Recall, no main effect of Stage, and no interaction between Recall and Stage. There was indeed a main effect of Recall in Prosocial Behavior, $F(1,28) = 7.02$, $p = .013$, but also a significant interaction between Recall and Stage, $F(4,112) = 8.07$, $p < .01$. Note, there was no main effect of Stage, $F(4,112) = 1.64$, $p = .170$. The pattern converged to a neutral point and did not remain attached to the low or high levels of (un)ethicality.

Finally, we wanted to know whether the data across stages showed any evidence of a residual effect of the Type of Ethical Recall factor, after STAGE 1. We ran an ANOVA with STAGES [2-5] and Recall. There was no main effect of Recall, no significant effect of Stage, and no interaction between the two factors, (all $F < 1$). Therefore, the main effect seen in the previous analysis, STAGES [1-5], is explained by the change from STAGE 1 to STAGE 2 and subsequently disappears.

The conclusion is that the ‘Flat pattern’, as in the idealized prediction, was maintained only for STAGES [0-1]. Prosocial behavior across the rest of stages converged to a neutral level of morality; thus, Moral Consistency was not maintained over time (Figure 3).

Experiment 3

In Experiment 2, after an initial mind-set induction and ethical recall, we found that the anticipated patterns of moral dynamics were not maintained. There are two possible explanations. First, the theory linking mind-set, (un)ethical recall, and ethical choice is incorrect or incomplete. Second, perhaps the mind-set induction attenuates rapidly with time, so that, after the initial stages, participants can no longer be assumed to be in a specific mind-set. Experiment 3 examines this second possibility. The experiment lasted approximately 40 minutes.

Participants

A total of 206 participants, all of them US residents, were recruited and received \$1 for doing the task.

Design and Procedure

The experiment was designed in Qualtrics and run on Amazon Mechanical Turk. The same procedure was followed as in Experiment 2, but we introduced a new manipulation (the re-evaluation process), in which participants were asked to reflect on their last moral choice, in order to reinforce their mind-set. This reinforcing manipulation was similar to the one at the beginning of the experiment (manipulation of the mind-set + un(ethical) recall). Participants followed the same steps as in Experiment 2, but justifying their choices, after their response, at each stage. The order of presentation of the moral scenarios on each stage, as well as the filler tasks, were randomized for each participant.

Results and Discussion

Moral Dynamics: Evidence for Moral Balancing.

We ran a two-way ANOVA, as in Experiment 2, with Type of Ethical Recall and Stage on the dependent variable. As before, Moral Balancing would be minimally evidenced by no main effect of Recall, but a significant interaction. Instead, there was a main effect of Recall, $F(1,28) = 40.4$, $p < .01$, and no effect of Stage, $F < 1$. The results also indicated a significant interaction between Recall and Stage, $F(4,112) = 7.54$, $p < .01$.

We then analyzed the evolution between STAGES [1-2] to see if, at least, the Moral Balancing pattern was maintained for just one more stage. A two-way ANOVA with two within participant factors, Type of Ethical Recall and Stage, revealed a similar pattern of results: a main effect of Recall, $F(1,28) = 44.5$, $p < .01$, no effect of Stage, $F < 1$, and a significant interaction between Recall and Stage, $F(1,28) = 30.9$, $p < .01$.

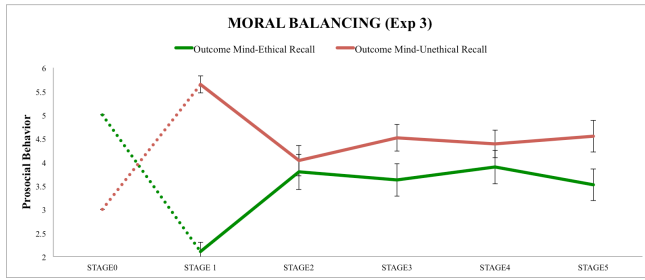


Figure 4: Evolution of Prosocial Behavior (Outcome Based Mind-set) in Experiment 3. Error bars represent SE.

Finally, we asked whether the data at each stage showed any evidence of a residual effect of Type of Ethical Recall factor after STAGE 1. We ran an ANOVA with STAGES [2-5] and Recall. There was a main effect of Recall, $F(1,28) = 9.37, p < .01$, no significant effect of stage, $F < 1$, and a non significant interaction between the two factors, $F < 1$. Therefore, the interaction seen in the previous analysis, STAGES [1-5], is explained by the change from STAGE 1 to STAGE 2 and disappears after that.

The conclusion is that the ‘Zig-Zag pattern’ was only approximately observed across STAGES [0-1]. Thus, compared with an idealized pattern, Moral Balancing was not a behavior maintained over time. Instead, as in Experiment 2, the evolution of the behavior converged to a neutral level of morality (Figure 4). In fact, as in Experiment 2 there was a tendency (statistically significant) for participants to settle into a Moral Consistency pattern from Stage 1 onwards, regardless of the reminders that had been introduced in the present experiment.

Moral Dynamics: Evidence for Moral Consistency.

Regarding the evolution between STAGES [1-5] in the Moral Consistency case, we ran a two-way ANOVA with two within participant factors, Type of Ethical Recall and Stage on the dependent variable.

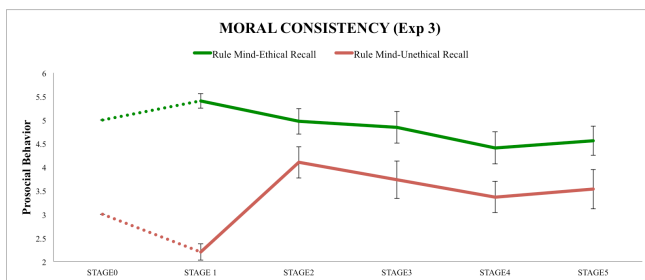


Figure 5: Evolution of Prosocial Behaviors (Rule Based Mind-set) in Experiment 3. Error bars represent SE.

Moral Consistency would be minimally evidenced by a main effect of Recall, but not a significant interaction. There was a main effect of Recall on Prosocial Behavior, $F(1,29) = 53.2, p < .01$, but not stage, $F(4,116) = 2.02, p = .096$. Also, the interaction between Recall and Stage was significant,

$F(4,116) = 5.68, p < .01$, which is not consistent with a ‘pure’ form of Moral Consistency.

Then, we ran an ANOVA with STAGES [2-5] and Type of Ethical Recall to see if the Moral Consistency pattern was maintained over time. There was a main effect of Recall, $F(1,29) = 18.88, p < .01$, no significant effect of Stage, $F < 1$, and a non significant interaction between the two, $F < 1$.

The conclusion is that the ‘Flat pattern’ was sustained to the low or high levels of (un)ethicity throughout STAGES [0-5], but not in the levels predicted in an idealized pattern. Moral Consistency was a behavior broadly maintained over time (with a tendency to converge to a neutral level of morality), if a re-evaluation process (manipulation of the mind-set + un(ethical) recall) was carried out before confronting each new moral scenario (Figure 5).

Discussion

This is the first study to look at the evolution of moral choice across a series of scenarios. Five scenarios were tested, embedded in a task with many fillers, to mask the design of the experiment. In two experiments, we provided new empirical support for the hypothesis that ethical mind-sets moderate how an individual’s behavioral history shapes his or her ethical behavior. An outcome-based mind-set is meant to lead to moral-balancing effects, whereas a rule-based mind-set to moral consistency. Furthermore, the three experiments shed some light on the persistence of these ethical mind-sets and on the evolution of moral dynamics, exploring whether moral patterns, such as Moral Balancing and Moral Consistency, can be maintained over time. When the manipulation of Mind-set and Recall was just made at the start, there was a quick regression to neutral performance. When the manipulation was reinforced before each moral choice, then one pattern of behavior was sustained, while the other was not.

Moral Balancing, or as we call it, the ‘Zig-Zag pattern’, was only observed in the first stage of the experiments. This type of behavior converged to a neutral level of morality over time, even when the mind-set was reinforced at every stage, before making a new moral judgment (Experiment 3). We conclude that Moral Balancing is not a behavior maintained over time. However, some would argue that moral licensing effects should not persist in an oscillating pattern over time. Imagine a less ethical behavior at t_0 that is compensated by a more ethical one at t_1 , and vice versa, an ethical behavior at t_0 that gives the license to an individual to behave less ethically at t_1 . At that point, balance is ‘restored’, and, the argument goes, it would be difficult to make predictions regarding further effects on behavior at t_2 and beyond.

On the other hand, participants in the Rule-based condition, approximated an idealized pattern of Moral Consistency behavior, when a re-evaluation process (manipulation of the mind-set + (un)ethical recall) was included, before confronting each new moral scenario. In other words, there was some evidence that Moral Consistency could be maintained over time, if the mind-set

was reinforced before each moral judgment. Either way, we overall conclude that ethical mind-sets (and their influence on prosocial choice) decay, unless reinforced continuously.

Moral Consistency is perhaps a more stable pattern of mind-set, since if a person is led into seeing himself/herself as consistent, it is perhaps more natural to remain consistent—that is the very nature of consistency. Conversely, Moral Balancing would seem to require the keeping of a running total of one's positive and negative acts, and once the initial stages are past, this tally-keeping may prove complex to maintain. It is easier to recall that one has consistently chosen the prosocial or anti-moral path and so keep that on, than it is to recall that one's last choice was pro, so the next one should be anti. This difference in stability might also account for the tendency in both Experiments 2 and 3 for the Moral Balancing group to show a continuing Moral Consistency after their initial response at Stage 1. Although all the data tended towards the middle of the scale, there was a residual difference between the Ethical Recall and Unethical Recall groups that persisted to the end.

Our results question the importance of the concept of mind-sets in understanding prosocial choice, since, if such mind-sets cannot be maintained across more than a few choices, what value could they have in understanding the relevant behaviors? We see three directions for future research in addressing this important question.

First, it is possible that an alternative mind-set induction procedure will reveal more lasting influences of mind-sets on prosocial choice.

Second, a related possibility is that the measurement of prosocial choice was inadequate. Perhaps people's prosocial choices do reflect patterns of consistency or balancing, across time, but such patterns can be revealed in realistic time scales of days or weeks, not within the limited duration of a psychology experiment. Also, there are merits and demerits of the different approaches regarding how we ask participants to respond to scenarios. We used a 7-point scale because it let us explore our hypotheses. Some would say that individuals who want to establish a balance between moral motives and selfish motives might achieve that by staying safely in the midrange of the scale. So balance can easily be achieved within each moral scenario, removing the necessity to balance over time. It may be the case that more interesting results would emerge with binary answering options (an ethical vs. an unethical alternative). However, the scale we opted to use did lead us to a particular interesting conclusion, namely that participants do neither Moral Balancing nor Moral Consistency, but rather achieve a middle ground.

Third, it is possible that the idea of manipulating mind-sets directly is flawed. In other words, perhaps there is a reality to the proposal that there are different mind-sets and these mind-sets can impact on prosocial choice, but perhaps these are stable individual characteristics. That is, people can have a particular mind-set, but the mind-set cannot be easily altered experimentally (at least in an effective way). All these issues reveal considerable challenges (and

corresponding exciting directions) for future work, regarding our current understanding of moral judgments.

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