Morality Through Familiar Eyes: How Moral Convictions and Repeated Exposure Influence Cognitive Functions

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Abstract

Moral convictions—deeply held beliefs about right and wrong—are typically considered rigid and resistant to change, often driven by intuitive emotional responses rather than deliberative reasoning. However, psychological research suggests that repeated exposure to stimuli enhances familiarity, which can, in turn, shape attitudes and cognitive processing. This study investigates the role of familiarity as a potential mechanism influencing moral convictions, with a specific focus on how repeated exposure to socio-political issues modulates attention and decision-making. Using an eye-tracking paradigm, participants completed a decision-making task in which they selected between two protest-related images, each associated with a socio-political issue that varied in familiarity and moral conviction intensity. Fixation duration, a key measure of cognitive engagement, was analyzed to determine whether highly familiar and morally charged topics reduce deliberative processing. Statistical analyses, including mixed-effects models and ANOVA, revealed that higher familiarity with a topic significantly predicted stronger moral conviction, supporting the hypothesis that exposure reinforces intuitive moralization. Additionally, familiarity and moral conviction were found to negatively predict fixation duration, suggesting that these factors decrease attention allocation, potentially bypassing cognitive scrutiny. These findings highlight the cognitive effects of exposure-driven familiarity on moral attitudes, contributing to a deeper understanding of how repeated interactions with socio-political content influence moral judgment. The implications of this research extend to digital media consumption, political polarization, and strategies for promoting critical thinking in moral discourse.

Introduction

The open casket of Emmett Till's brutalized body shocked the conscience of a nation. Published in 1955 on the covers of Jet Magazine and The Chicago Defender, repeated exposure to this haunting image triggered a collective moral awakening, fueling the growing civil rights movement. However, familiarity does not always align with social justice. A striking example is the 1964 campaign ad Daisy, which featured a young girl counting down as a nuclear explosion loomed ominously (Johnson, 1964). Through repeated exposure, the ad framed voting against the opposing candidate as a moral imperative, leveraging fear and emotion as a political tool rather than an appeal to reason or justice. These two contrasting examples illustrate the power of repeated exposure in shaping moral conviction, regardless of justice or consensus.

Cognitive psychology research suggests that topic familiarity—a product of repeated exposure—plays a critical role in shaping attitudes and judgments. The mere exposure effect (Zajonc, 1968) describes how repeated exposure to a stimulus fosters a sense of preference or fluency, even in the absence of deliberate reasoning. In moral contexts, where moral judgments tend to rely on intuitive processing (Haidt, 2001), repeated exposure to socio-political content could solidify moral stances, reinforcing certainty and reducing cognitive scrutiny. This view supports the idea of moral beliefs functioning as heuristics that streamline cognitive load in decision-making (Krebs, 2008; Machin & Dunbar, 2016).

While the behavioral effects of moral convictions have been thoroughly studied (Skitka & Morgan, 2014), little is known about their impact on cognitive functions. Moreover, no literature comprehensively reviews whether topic familiarity, as a product of repeated exposure, is associated with morally charged beliefs. Consequently, this study will examine the relationship between topic familiarity, moral convictions, and cognitive functions related to decision-making.

Literature Review

The Automaticity of Moral Judgment and the Role of Emotions

Moral judgments are characteristically fast, often arising from automatic, intuitive processes rather than lengthy deliberation (Haidt, 2001). Moral evaluations are typically made more quickly than non-moral evaluations in decision-making contexts, bypassing the cognitive processing associated with deliberation (Van Bavel et al., 2012). This immediacy aligns with the intuitive process of moralization, where preferences transform into moral convictions through emotional and social mechanisms (Rozin, 1999). Emotions such as disgust, anger, and empathy play a critical role in this transformation, serving as core mechanisms in moralization and providing an intuitive basis for moral judgment (Helion & Ochsner, 2016; Rozin, 1999). This automaticity explains why moral beliefs become powerful and immediate, rooted in emotional

responses rather than cognitive reasoning, and are often held with rigid, uncompromising certainty.

Physiological evidence further supports the role of emotions in moral judgment. Decisions involving moral convictions elicit measurable physiological and emotional arousal (Garrett, 2019). Additionally, neuroscience literature demonstrates that in moral decision-making tasks, higher activity is observed in the ventromedial prefrontal cortex (vmPFC), which is responsible for subjective value coding, compared to the dorsolateral prefrontal cortex (dlPFC), which is associated with cost-benefit analysis (Decety, 2024). These findings highlight the antithetical relationship between deliberative cost-benefit analysis and emotionally charged moral convictions. While moral convictions are emotional and intuitive, they are not typically reinforced through extensive cognitive processing.

The Role of Deliberative Cognitive Processes in Moral Convictions

While emotions dominate the formation of moral judgments, deliberative processes can still influence the development and flexibility of moral convictions. Moral convictions, defined as rigid and inflexible beliefs resistant to change, often arise from quick, emotionally driven processes (Skitka et al., 2005). The intuitive and unyielding nature of these convictions contrasts with deliberative cognitive processes, which promote flexibility and situational adaptability (Cecchini, 2023; Skitka & Morgan, 2014).

Emotion regulation, for instance, facilitates deliberative processes, allowing for more reflective moral judgments (Helion & Ochsner, 2016). Furthermore, deliberation can counter the rigidity of moral convictions by fostering context-sensitive flexibility in moral judgments (Bartels, 2008). The incorporation of deliberate cognition introduces an element of adaptability that contrasts with the inflexibility of strong moral convictions. However, much of the research on cognitive processes in moral decision-making remains theoretical or philosophical, with limited experimental studies confirming these perspectives empirically (Fiedler & Glöckner, 2015).

Familiarity, Reduced Attention, and Moral Conviction Through Exposure

Exposure and familiarity with socio-political issues may influence cognition and emotional engagement. A meta-analysis by Montoya et al. (2017) found that excessive exposure to stimuli is associated with positive affect and reduced attention. This suggests that familiarity strengthens emotional responses while simultaneously inhibiting attention allocation—one of the cognitive processes essential for deliberation (Young & Claypool, 2010). Moreover, unconscious familiarity correlates more strongly with attitude formation than conscious recognition (Hansen & Wänke, 2009).

The reduction in attention resulting from familiarity and repeated exposure could be a mechanism involved in the formation of moral convictions. Familiarity's ability to diminish attentive engagement suggests that high exposure can foster rigid, intuitive, and emotionally charged moral stances by limiting opportunities for critical evaluation (Bartels, 2008; Hansen & Wänke, 2009). While the effects of mere exposure on attention are well established in cognitive psychology literature, very few studies have explored this effect as a mechanism for moral convictions. Given that familiarity serves as a proxy for high exposure (Hansen & Wänke, 2009; Montoya et al., 2017), I predict that repeated exposure facilitates moral conviction by evoking positive emotions and attenuating deliberative cognitive processes.

Eye-Tracking's Potential Insight into Moral Decision-Making

Eye fixation duration is a reliable measure of attention allocation in adults (Papageorgiou et al., 2014) and cognitive resource demands in decision-making contexts (Jang et al., 2020). Additionally, fixation duration may indicate higher demands on memory and cognitive processes (Goldberg & Helfman, 2010; Wang et al., 2014; Zagermann et al., 2018).

Although few studies have utilized eye-tracking in moral judgment and decision-making research (Fiedler & Glöckner, 2015), none have examined moral conviction through eye-tracking as a method for measuring cognition. Eye-tracking provides insights into how attention and deliberative cognitive processes are modulated in response to sociopolitical issues with varying levels of familiarity and moral conviction.

Fixation duration will be operationalized as a measure of attention and cognitive processing. I hypothesize that sociopolitical issues that are more familiar and highly moralized will reduce total fixation duration. Furthermore, the number of fixations is a relevant indicator of decision difficulty in decision-making trials (Zagermann et al., 2018). More specifically, fixation count has been found to correlate positively with decision difficulty, where a higher number of fixations indicates increased information sampling (Callaway et al., 2021). Since moral convictions facilitate fast, intuitive decision-making, I suspect they streamline cognitive processes during decision-making. Accordingly, I hypothesize that large differences in moral conviction and topic familiarity will result in fewer fixation occurrences, optimizing cognitive efficiency during decision-making.

Current Study

The moral psychology literature demonstrates that moral convictions—defined as inflexible and rigid moral beliefs—are, by default, emotional and intuitive. Furthermore, moral psychology research reveals that emotion regulation and deliberative cognitive processes shape moral beliefs, making them more flexible and less rigid. Conversely, Hansen and

Wänke (2009) found that familiarity, which stems from repeated exposure, reduces attention allocation and influences emotional and cognitive engagement with social attitudes. However, no studies have specifically examined the relationship between familiarity, repeated exposure, and moral convictions. This gap presents a compelling case for investigating how familiarity and attention interact to shape moral convictions and whether familiarity serves as one of the mechanisms through which moral convictions emerge.

This study examines this research gap through two primary questions: what is the relationship between familiarity and moral conviction, and do familiarity and moral conviction predict attention allocation? The first hypothesis posits that topic familiarity will be positively correlated with stronger moral convictions. As a measure of exposure, topic familiarity is hypothesized to facilitate moral conviction by bypassing deliberative cognitive processes and engaging intuitive emotional responses. This reasoning is supported by findings on the mere exposure effect, which links repeated exposure to positive affect and intuitive engagement (Hansen & Wänke, 2009; Montoya et al., 2017), as well as research on moral convictions, which characterizes them as inflexible, universalized moral beliefs associated with emotions and automatic responses (Cecchini, 2023; Skitka & Morgan, 2014).

The second hypothesis predicts that the difference between the two choices in topic familiarity and moral conviction will negatively predict attention allocation in decision-making tasks. Trials featuring greater differences in topic familiarity and moral conviction will be associated with shorter fixation durations, indicating reduced cognitive engagement. This prediction aligns with prior research demonstrating that familiar stimuli require less cognitive effort (Young & Claypool, 2010), as well as the broader view that intuitive moral convictions form in the absence of deliberative scrutiny.

The third hypothesis predicts that moral conviction and topic familiarity will be negatively associated with fixation count. Since fixation count is an indicator of cognitive load in decision-making, greater differences in moral conviction and topic familiarity should facilitate faster and more efficient decision-making, reducing cognitive effort. By testing these hypotheses, this study aims to contribute to the growing body of research on the cognitive mechanisms underlying moral convictions and their relationship with exposure and attention allocation.

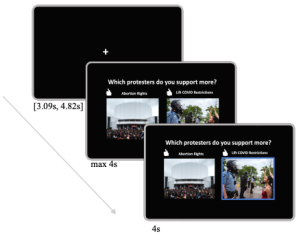
Methods

To test the first hypothesis, this study employs an experiment designed to examine attention allocation in the context of decision-making. The experiment measures neural activity in brain regions associated with moral decision-making, with eye-tracking used to confirm participants' attentional engagement. Before the experiment, participants complete a pretest survey assessing 42 different socio-political issues, where familiarity and moral convictions are measured for each individual. Familiarity is rated on a 4-point scale (ranging from "not familiar" to "very familiar"), while moral conviction is assessed using the average of two items on a 5-point scale: "To what extent is your position on [issue] a reflection of your core moral beliefs and convictions?" and "To what extent is your position on [issue] connected to your beliefs about fundamental right and wrong?" (Skitka & Morgan, 2014). Additionally, political support is measured on a 7-point scale (ranging from -3 to +3) to differentiate between moral convictions and political alignment.

The experiment consists of a decision-making task in which participants, in each trial, view two photographs depicting protesters advocating for or against socio-political movements measured in the pretest survey. The final dataset contains 34 participants and 3,621 trials (an average of 107 trials per participant) after data cleaning. A sample size of 34 participants was chosen to balance feasibility and statistical power, given the repeated-measures design, in which each participant contributes data across multiple trials, increasing the study's statistical sensitivity. To reduce confounding variables, the decision-making task includes thumbs-up or thumbs-down icons next to the photos to indicate whether the protesters support or oppose the issue. These icons help display the range of support levels across trials and mitigate potential collinearity between support and moral conviction ratings. Throughout the decision-making task, all issues rated as familiar appear at least once. The total number of familiar issues per participant ranges from 24 to 40. When the two photographs appear on the screen, participants have four seconds to respond before the program automatically proceeds to the next trial. All stimuli are presented using E-Prime 2.0 (Psychology Software Tools, Pittsburgh, PA, USA). Participants' eye movements are tracked using an EyeLink 1000 Plus Eye Tracker (SR Research, Ontario, Canada).

Figure 1

The Decision-making Trial Sequence



The eye-tracking device is used to confirm participants' attention and record two key eye-tracking measures: fixations and saccades. Fixations are defined as instances where the eye remains steadily focused on a specific item or location (Laan et al., 2015), while saccades are rapid eye movements shifting gaze between two fixation points (Ross et al., 2001).

Fixation duration is calculated as the sum of the duration of all fixations occurring within the window from stimulus onset to participant response. The eye-tracking device also automatically records the number of fixations within each trial. Both fixation duration and fixation count are analyzed per trial, with each trial assigned a total number of fixations and an overall fixation duration. Fixation duration serves as a proxy measure for attention allocation, where longer durations indicate greater attention engagement (Holmqvist et al., 2011a). Conversely, fixation count is used as a proxy for decision difficulty, as higher fixation counts have been associated with more complex decision-making processes (Ernst & Wolfe, 2022).

Pearson's correlation coefficient is calculated to assess the relationship between familiarity ratings and moral conviction scores, providing a test of the first hypothesis. Additionally, a binomial test is conducted to examine how frequently the issue with the highest moral conviction score also has the highest familiarity rating. To test the second hypothesis, a mixed-effects regression model is used to analyze whether familiarity and moral conviction predict total fixation duration. The mixed-effects model is chosen due to the individual variability in fixation duration, which can differ between participants (Holmqvist et al., 2011b).

The eye-tracking raw files are converted into ASCII format, containing automatically coded and time-stamped events such as eye fixations and saccades, along with other gaze events. The eye-tracking device is synchronized with the E-Prime experiment module, allowing for cross-referencing of eye-tracking events with the experimental trials. Fixation duration is defined as the sum total of all fixations occurring within the response time window for a given trial. Trials with fixation durations of less than 100 milliseconds are excluded, as well as trials with zero fixations, as these likely indicate errors in the eye-tracking procedure. Furthermore, a linear mixed-effects regression is performed to assess the statistical significance and predictive strength of moral convictions and familiarity on fixation duration. After data cleaning and processing, the final dataset includes 33 participants who collectively completed 3,328 decision-making trials, which are incorporated into the statistical model.

Table 1

General Eye-tracking Results for Left and Right Screen Choices

Variable	Mean	SD
Fixation Duration (Right) (ms)	968.8	392.7
Number of Fixations (Right)	4.6	2.0
Fixation Duration (Left) (ms)	971.4	410.7
Number of Fixations (Left)	5.2	2.1

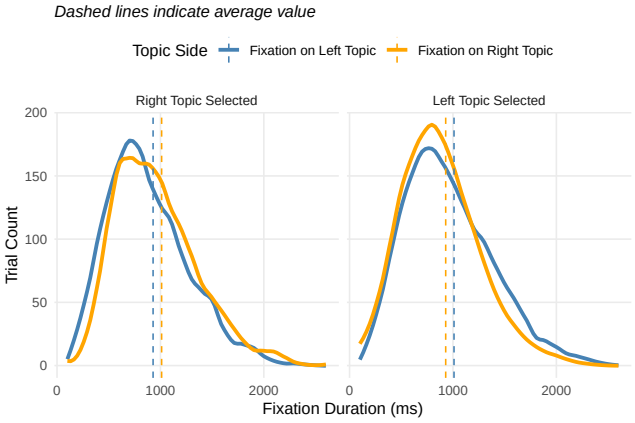
Results

General Results

In the time-constrained selection trials, participants spent an average of 2.71 seconds to complete a topic-selection trial, with a standard deviation of 624 milliseconds. Within the response time window, the eye tracker detected that participants spent an average fixation time of 1.94 seconds, with a standard deviation of 562 milliseconds. An average of 9.8 fixation occurrences were registered per trial, with a standard deviation of 2.9 occurrences. The fixation rate, calculated as the percentage of fixation time relative to response time, averaged around 70.9 %, with a standard deviation of 9.3 %.

Figure 2

Fixation Duration Frequency Distribution for Left and Right Topics



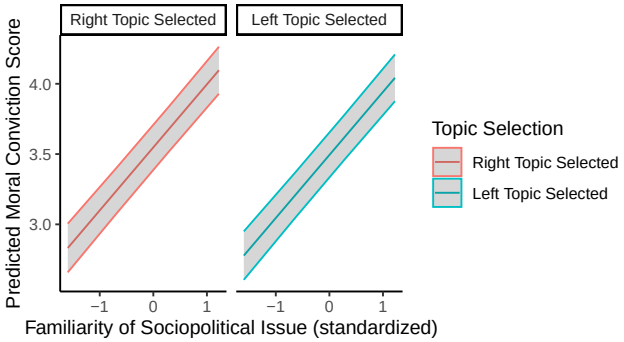
As Table 1 the average fixation duration and number of fixations across left and right topics were fairly similar across all trials. Where Figure 2 further illustrates this, by showing the similarity of the eye-tracking values across the two opposing topics across trials throughout both selections. Through a one-way ANOVA test , it was confirmed that the selection of a topic on the left or right did not influence the response time in a meaningful way ($F(1 , 3326) = 0.6$, $p = 0.44$). However , a one-way anova test show that participants fixated more on the topic that they selected ($F(1 , 3326) = 32.95$ $p<0.001$). Figure 2 confirms this finding , as the mean fixation value of the chosen topic is higher than the unchosen one in both scenarios.

Topic Familiarity As a Predictor of Moral Convictions

In running a linear mixed-effects regression model, the familiarity of the sociopolitical issue was the strongest positive predictor of moral convictions (β=0.448, $p<0.001$) when either topic was selected as shown in Figure 3. On the other hand , the support variable was not significant in predicting moral convictions(β=-0.011, p=0.546).This suggests that

Figure 3

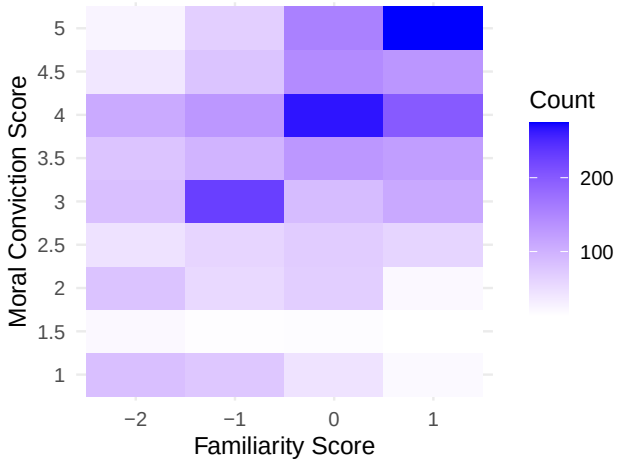
The effect of topic familiarity on moral conviction score



the repeated exposure to an issue shapes the intensity of the moral beliefs more so than the political support for this issue.Through a Pearson correlation test, moral conviction and topic familiarity were also positively correlated (0.325, p <0.001), where most of the highly familiar sociopolitical issues were highly moralized , as Figure 4 illustrates. Other demographic factors , including religiosity, did not significantly predict moral conviction scores.

Figure 4

The Count of Topics Across Familiarity and Moral Conviction Score



Topic Familiarity and Moral Convictions in Predicting Fixation Duration

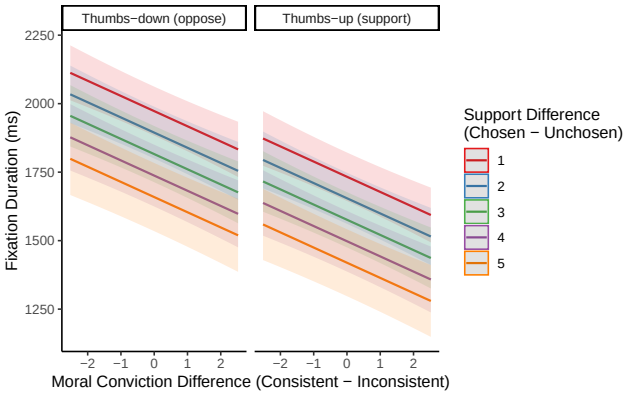
In analyzing the response time and eye-tracking variables, the independent variables of interest were operationalized through involving the two topics presented to the participant. Moral conviction was measured as the the difference between the moral conviction scores of consistent and inconsistent items, where the moral socre of the inconsistent item was subtracted from that of the consistent item.

$$\textbf{Moral Conviction Difference} = \textbf{Moral Conviction Score}_{\textbf{consistent item}} - \textbf{Moral Conviction Score}_{\textbf{inconsistent item}}$$

Familiarity was measured similarly, where the familiarity score for the inconsistent item was also subtracted from the familiarity score of the inconsitent item. The same logic was also applied to operationalizing the political support variable. A linear mixed-effects regression analysis was conducted to examine the relationship between fixation duration and several predictors. Fixation duration was modeled as the dependent variable, wiuth differences in political support, topic familiarity , and moral conviction scores -as well as other covariates, entered as fixed effects. To account for repeated measures and idiosyncratic differences in gaze-movement patterns, random intercept were included for participants.

Figure 5

The effect of moral conviction difference, political support difference, and protest indication on eye fixation duration



The protest indication variable, which indicates whether the trial featured a thumbs-up or a thumbs-down next to the topics, was the strongest predictor in the model, trending negatively with fixation duration (β=-239.601, p<0.001). This means that when the trial features a thumbs-up indicator instead of a thumbs down, the fixation duration time is severely reduced, translating in a more effective attention allocation when the protestors are seen as supporting the cause than when they are opposing it. The difference in moral conviction scores was also a statistically significant negative predictor of fixation duration (β=-55.383, p<0.001). Indicating that the more a topic is moralized than the other, the more effective the attention allocation is. Topic familiarity was statistically significant in two different forms: the difference of topic familiarity significantly reduced fixation duration (β=-25.276, p=0.007), and the topic familiarity of the left image specifi-

cally was an even stronger negative predictor of fixation duration (β=-47.58, p<0.001). The strong predictive value of the left-hand topic's familiarity may reflect a scanning bias induced by habitual left-to-right reading. Since readers of the English lanugage are accustomed to beginning their visual exploration on the left, initial attention is more readily allocated to left-side stimuli. The interaction between the differences of topic familiarity and moral conviction scores were negative, but not statistically significant (β=-15.399, p=0.071). Figure 5 illustrates the effect of the difference in moral conviction, political support difference, and protest indication as predictors of eye fixation duration (attention allocation).

Figure 6

The effect of moral conviction difference, political support difference, and protest indication on fixation count

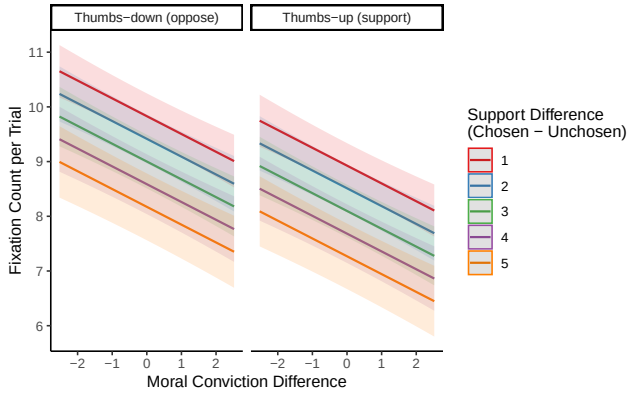
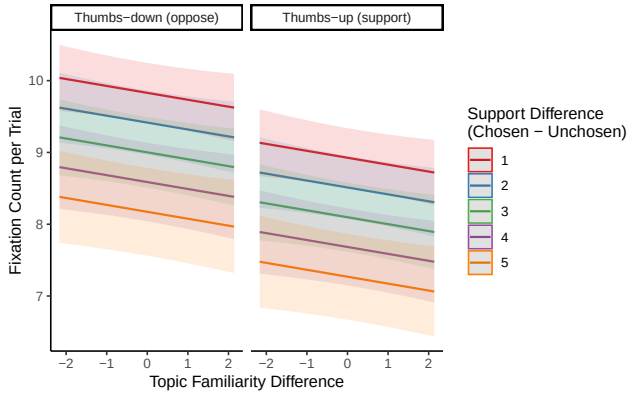


Figure 7

The effect of topic familiarity difference, political support difference, and protest indication on fixation count



Moral Convictions, Topic Familiarity, and Fixation Count (Decision Difficulty)

As a main effect, difference in moral convictions were statistically significant in negatively predicting fixation count (β=-0.326, p<0.001), as well as differences in topic familiarity (β=-0.096, p=0.048). Furthermore , the interaction between moral convictions and topic familiarity were statistically significant in negatively predicting fixation count , with a small effect (β=-0.09, p=0.041). Protest Indication (whether the trial featured a thumbs-up or thumbs-down) was the strongest negative predictor of fixation count (β=-0.904, p<0.001). Difference in political support was also statistically significant in reducing the fixation count (β=-0.414, p<0.001). as Figure 6 and Figure 7 indicate, moral convictions and topic familiarity drive a reduction in fixation counts per trial. Which indicates the role that moral convictions and topic familiarity play in optimizing the cognitive load in decision-making. However, the difference in moral conviction illustrates a sharper negative trend in fixation count than differences in topic familiarity.

Discussion

The findings of this study provide strong evidence that topic familiarity is a significant predictor of moral convictions regarding socio-political issues. The results support the hypothesis that repeated exposure to a socio-political issue correlates positively with stronger moral convictions (β=0.448, p<0.001). Additionally, both moral convictions (β=-55.383, p<0.001) and topic familiarity (β=-25.276, p=0.007) were statistically significant in negatively predicting fixation duration, a widely used measure of attention allocation (Papageorgiou et al., 2014). This finding suggests that higher differences in moral conviction and topic familiarity resulted in participants allocating less attention during decision-making. This aligns with previous literature stating that moral convictions and moral judgments tend to be intuitive and automatic rather than deliberative and reflective (Cecchini, 2023; Skitka & Morgan, 2014). The findings also reinforce prior work demonstrating that repeated exposure, as measured by topic familiarity, is associated with reduced attention allocation (Hansen & Wänke, 2009; Young & Claypool, 2010). A possible venue of how topic familiarity correlates with moral conviction is through improved cognitive fluency, a phenomenon where familiar stimuli are easier to process, and as a result , feel more true and valid. Frequently repeated statements impacts the illusory truth effect, where they are "perceived" as more truthful, regardless of it's factual accuracy (Hassan & Barber, 2021). A similar mechanism could be moderating the relationship between topic familiarity and moral convictions.

The relationship between moral convictions, topic familiarity, and fixation count further supports the idea that famil-

iarity and moral convictions streamline cognitive processes in decision-making. Fixation counts are often used as an indicator of decision complexity, as higher fixation counts typically correspond to more difficult decision-making processes, where participants require additional fixations to gather the necessary information for a decision (Callaway et al., 2021). The present study found that, as main effects, both moral convictions (β=-0.326, p<0.001) and topic familiarity (β=-0.096, p=0.048) were statistically significant in negatively predicting fixation count during trials. Additionally, an interaction between topic familiarity and moral convictions was statistically significant in negatively predicting fixation count (β=-0.09, p=0.041). This suggests that repeated exposure to a socio-political issue may amplify the effect of moral convictions on cognitive deliberation, further reducing the need for extensive information processing during decision-making.

These findings contribute to the broader discussion of how moral convictions and familiarity affect cognitive processes. Repeated exposure and familiarity have been shown to reinforce automaticity in judgment formation, while moral convictions have long been characterized as rigid, intuitive beliefs that bypass extensive deliberation. The current study integrates these two bodies of research by demonstrating that repeated exposure to socio-political issues reinforces moral convictions, which, in turn, attenuate cognitive functions such as attention allocation and decision complexity. These results further align with literature suggesting that moral intuitions optimize cognitive resources by streamlining decision-making processes (Van Bavel et al., 2012). The study also found that differences in moral conviction reliably resulted in faster responses (β=-59.19, p<0.001) as did differences in topic familiarity (β=-37, p=0.001). These findings reinforce the notion that judgments stemming from strong moral convictions are more automatic and rapid, reducing cognitive effort. Decisions involving a strong contrast in moral conviction between two topics were also easier to make, supporting the idea that moral systems, such as religions, could function as heuristics that reduce cognitive load during decision-making (Boyer, 2008). The study also aligns with social psychology research characterizing moral judgments as value-based decisions that stabilize decision-making processes (Cohen et al., 2023). Additionally, it extends Skitka and Mullen (2002)'s argument that moral convictions are inflexible and extreme beliefs by establishing their impact on cognitive functions in a decision-making context.

The relationship between topic familiarity and moral convictions raises important questions about the direction of causality. While this study found a correlation and a statistically significant positive association between these two variables, it does not establish that topic familiarity necessarily precedes moral conviction formation. One possibility is that individuals first develop moral convictions and subsequently seek out content related to those issues, reinforcing their familiarity over time. Alternatively, exposure to an issue may gradually increase familiarity, which then facilitates the formation of moral convictions. A more direct test of causality would involve experimentally inducing familiarity in a controlled setting and measuring whether moral conviction scores increase as a result. Future research should explore this possibility by manipulating exposure to specific socio-political topics and examining changes in moral conviction over time.

The use of eye-tracking as a method to measure cognitive engagement represents a novel contribution to the study of moral conviction. While eye-tracking is widely used in cognitive psychology, this study is among the first to implement it in the context of moral decision-making. The use of fixation duration as a measure of attention allocation demonstrates the potential of eye-tracking in revealing underlying cognitive processes. Moreover, fixation duration provides a more nuanced picture of cognitive engagement than simple response time measures, offering insights into the attentional mechanisms that drive moral decision-making. However, a limitation of this study is that the stimuli were not controlled for brightness and contrast, preventing an analysis of pupil dilation, which could have provided additional insights into participants' cognitive load and affective responses. Future studies could incorporate pupillometry to examine the emotional effects of moral convictions and familiarity.

Beyond eye-tracking, there are other ways to expand on this study's findings. Future research could examine what specific visual elements draw attention in morally charged decision-making scenarios. For instance, do participants focus more on symbolic elements in protest images, such as flags, slogans, or raised fists, or do they primarily attend to textual descriptions of the socio-political issue? This line of research could help clarify the visual processing mechanisms that contribute to moral conviction formation. Additionally, the present study used a relatively simple decision-making task with a lean set of stimuli. Future studies could introduce more complex tasks to investigate whether moral convictions serve as heuristics in cognitively demanding environments. The current findings suggest that moral convictions reduce cognitive load in decision-making (β=-0.326, p<0.001), but the next step would be to explore the underlying mechanisms driving this effect.

The practical implications of this research are particularly relevant in the context of digital media consumption. Social media platforms use algorithm-driven content distribution systems that expose users to the same topics repeatedly, creating digital echo chambers (Duskin et al., 2024). This constant exposure likely strengthens moral convictions, making beliefs more rigid and resistant to change. Moral judgments often elicit strong physiological and emotional reactions (Garrett, 2019), which may contribute to the polarization and hostility observed in online discourse. Research by

Huszár et al. (2021) found that Twitter's algorithm amplifies emotionally charged content, particularly content that promotes anger and animosity toward out-group members. This aligns with the present study's findings that familiarity reinforces moral convictions, potentially reducing cognitive deliberation in moral discourse. These insights highlight the need for digital literacy programs that encourage individuals to engage critically with familiar moral issues rather than passively accepting intuitive judgments. Furthermore, this study's findings could contribute to the growing body of literature exploring misinformation in social media spaces. If a certain moralized issue becomes familiar enough through social media echo chambers, it is possible that it bypasses the cognitive deliberation functions necessary to scrutinize its factual accuracy. Consequently, a piece of misinformation could survive several correctional efforts once it bypasses congitive processes and biases that stem from repeated exposure (Ecker et al., 2022).

A future study could test whether interventions designed to increase deliberative engagement—such as prompting individuals to consider counterarguments—could mitigate the cognitive effects of familiarity and moral conviction. While moral decision-making is not strictly emotional and intuitive (Bartels, 2008), moral convictions can create cognitive rigidity that limits productive discourse and self-reflection. Future research could explore how perceived consensus and topic familiarity influence news consumption patterns in social media contexts, investigating how individuals selectively accept or reject information that aligns with their moral convictions. Furthermore, the present study paves the way to understand how a social media blackout -restricting or eliminating social media from daily life- can influence moral convictions of trending socio-political topics.

While this study's findings are significant, they should be interpreted with caution due to the relatively small sample size (n=33), which limits generalizability. Future research should replicate these findings with a larger and more diverse participant pool, as well as a wider range of socio-political topics, to enhance the external validity of the results. A longitudinal study could also provide a more comprehensive understanding of how media exposure patterns contribute to the formation and entrenchment of moral convictions. Additionally, because this study relied on self-reported familiarity levels rather than experimentally manipulating exposure, it remains unclear whether familiarity directly causes moral conviction formation. A future experiment could simulate familiarity by repeatedly exposing participants to moralizable socio-political topics and measuring cognitive and affective responses over time. Finally, while this study focused on cognitive effects, future research could examine the emotional dimension of moral convictions by using physiological measures such as skin conductance responses to capture affective arousal in moral decision-making tasks.

By integrating insights from moral psychology, cognitive science, and digital media research, this study sheds light on how familiarity and moral conviction interact to shape decision-making. Understanding the cognitive effects of repeated exposure may help explain the intensification of moral divisions in the digital age. Future research should explore strategies to promote critical thinking and open-mindedness in an era of algorithm-driven moralization.

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