Revising Impressions with the Authority Moral Foundation

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Thesis Title

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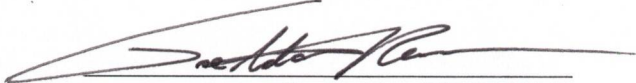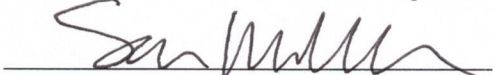Author's Name

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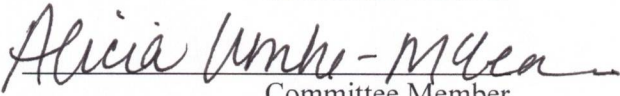
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Abstract

Past research argues that judgments of morality supersede warmth or competence when forming impressions, and that some people will revise an impression based on highly diagnostic moral information. Moral Foundations Theory proposes that people will differ in the endorsement of five moral domains (Care, Fairness, Loyalty, Authority, and Sanctity). Impression research has been mostly focused on moral situations that would categorically fall into the endorsement of Care and Fairness (Individualizing Foundations). This would be the first experiment to isolate a Binding Foundation in impression research. I hypothesize participants would update their impressions to a greater degree when given new authority-violation information as their endorsement of the Authority Foundation (a Binding Foundation) grows. In this experiment, I used qualitative analysis through a Qualtrics survey to gather data. I used Individuating Foundations information to guide participants to create a positive moral first impression of a target. Then, I attempted to provoke participants to update their impressions by presenting some with new information concerning a violation of the Authority Foundation (vs. neutral information). A hierarchical regression revealed my hypothesis was partially supported as there was a significant main effect between the Negative Authority Condition and the participants' final impression. However, regardless of their measured Authority endorsement, participants rated the target more negatively after reading the target's authority-violating acts. It's possible the results imply the use of the Authority Foundation could cause a negative impression from authority-violation information. In future studies, implicit measures should be added to determine moral impressions. The current experiment is a first step towards understanding how specific moral considerations affect and change impressions and further research could expand current arguments about Moral Foundations Theory and impression research.

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Revising Impressions with the Authority Moral Foundation

It takes less than one second after looking at someone to form a first impression. People will promptly scan others for indicators that a stranger will either help them or hurt them. Throughout our history as a species, people have survived on knowing if the person they are about to interact with is trustworthy and morally virtuous. However, what is considered moral depends on the individual to some extent. To begin to understand the different ways morality can influence the ways people think of others, we must understand what factors influence people's first impressions and the extent to which first impressions depend on moral considerations.

Once a first impression is formed, they are fairly persistent. But impressions can change. It is worth noting, therefore, what can change peoples' opinions of one another from those first formed. Past research expounds on how people form and revise their impressions, including how these impressions can be shaped by moral considerations, but this work is still in its preliminary stages. For instance, to date, this research has lacked consideration of *differing* moral beliefs. If morals influence impressions as research suggests, then people may differ in how they revise their impressions to the extent that they endorse a particular moral foundation. In the following, I will review pertinent research about how first impressions are formed and updated, how moral information influences these processes, and propose a novel hypothesis developed to explore exactly how different types of moral beliefs can alter first impressions.

The Foundations of First Impressions

To explain one another's behavior, people form schemata to organize their understanding of other's capabilities. Reeder and Brewer's (1979) schematic Model of Dispositional Attribution asserts an individual can be classified in terms of a dimension based on the extremity of their relevant behavior. Attributions of cause for these extreme behaviors is then hierarchically

restricted (i.e., some are more restricted than are others), such that people believe that those who possess some extreme negative qualities (e.g., amorality) are more capable of adjusting their behavior according to situations (adjusting their moral behaviors to situations), while those who possess extreme positive qualities (e.g., morality) would be less capable of adjusting their behavior to situations or vice versa depending on the trait.

These hierarchically restricted beliefs justify attributing specific behaviors to actors' dispositions. For example, people might expect that an extremely honest person would refrain from dishonesty in every situation, but that an extremely dishonest person would be both honest and dishonest depending on the situation. Therefore, these hierarchically restrictive schemata guide assumptions concerning actors' behavior dispositions to a differing degree depending on their extremity.

When forming first impressions, relatively little information can guide how people perceive one another. For example, when listing the traits of a fictional person, changing only one descriptor can change people's assumptions about a fictitious person (Asch, 1947). Even priming participants with subtly presented positive or negative words, like "love" or "death", can alter the first impressions participants form of others (Rydell et al, 2006).

For decades, much of the research examining impression formation focused on the importance of warmth and competence in person perception. Since the 1940's, research has consistently identified intelligence, skillfulness, and warmth as the most desirable among the traits a person could possess (Asch, 1947). People seem to find that those who actively help others appear as warm whereas those who are capable are seen as competent (Cuddy et al., 2007). These traits which reflect warmth and competence are thought of as fundamental components of social desirability (Rosenberg et al., 1968).

People's stereotypic assumptions about others' warmth and competence can be based on how they have interacted with those groups. For instance, the more a perceiver has interacted with a social target, the warmer they perceive those targets to be (Fiske, 2018). Further, information about others' warmth and competence can originate from knowledge of social categories (Fiske, 2018). For instance, those that people identify as being members of their ingroups or as being loyal to their ingroups might be perceived as both warm and competent (Fiske et al., 2002).

Moreover, the Stereotyping Content Model (SCM) assumes that people want to know a person's goals and intentions upon meeting them for the first time and that stereotypic category information can be used to infer this information (Fiske, 2018). The SCM also holds that people's stereotypes about others will fall into mixed clusters of containing varying degrees of warmth and competence. Groups which people view as cooperative are thought of as being warmer, whereas high status groups are viewed as being more competent. Conversely, competitive groups are seen as being colder, whereas low status groups are viewed as being less competent.

Possessing warmth and competence or traits that imply warmth and competence are thought to influence a range of reactions that people have to those they believe to be with and without each quality. For instance, high warmth and low competence evoke pity and sympathy, while high competence and low warmth evokes jealousy and envy (Fiske et al., 2002). People typically develop positive attitudes towards those who possess warmth or competence (Asch, 1947). Therefore, beliefs concerning other's warmth and competence guide the formation of positive or negative impressions. That is, believing others to be warm and competent are

essential for forming positive first impression. However, those first impressions may not last when presented with new information.

Revising First Impressions

Once an impression is formed, it can be difficult to change. A generalized impression can last at least a week even if the first impression was based on very limited information (Tordorov & Uleman, 2004). However persistent people's first impressions may be, research suggests that they are, indeed, changeable.

Certain types of information can lead people to update their first impressions. Specifically, information that is highly diagnostic and believable often leads people to revise their initial impressions (Ferguson et al., 2019). Diagnositicy refers to extent to which a behavior or trait is particularly defining. For example, in one study, participants saw a particular face appear on the screen accompanied by an audible scream to associate negative reactions to each target face (Mann et al., 2019). Then, other faces and the target face were randomly paired with either positive or negative words and implicit and explicit impressions of each face were measured. Having associated target faces with screams, participants formed negative implicit and explicit first impressions with those target faces.

However, participants next learned either that the target had performed a particularly brave act (i.e., saved a baby from a fire) or were given information irrelevant to what they had initially learned about him. Those who learned that the target had saved a baby from a fire revised their impressions of the individual to be more positive than did those who were given the irrelevant and non-diagnostic information, regardless of all previous negative associations. The brave act is very telling of a person's character and is, therefore, diagnostic enough to provoke people to revise their negative impressions.

Further work demonstrates that this general effect of diagnostic information depends on the extent to which the participants believe the new information. Generally, the source of the information will heavily influence the extent to which people believe the new information. For instance, in one study participants were given positive information about a target, but were then given negative, diagnostic information designed to change their opinion (Cone et al., 2017). However, participants were told that the negative information came from either a believable source, such as a police report, or from an untrustworthy source such as a jealous ex-girlfriend. Those who thought a jealous ex-girlfriend provided the new negative information continued to think positively of the man. Those who believed the information came from the police updated their impression and reported more negative impressions of the man. Because the police reports were more believable, they were more influential in provoking participants to revise their judgements.

Another way new information can lead people to update their initial impressions is by leading them to reinterpret the information on which they based their initial impressions. For instance, Mann and Ferguson (2015) told their participants that a fictitious person named Francis West broke into his neighbor's house, poured water on their electronics, and stole precious items. After receiving this information, participants formed negative impressions of Francis. However, participants learned new information that prompted them to revise their impressions of him. Specifically, they learned that the neighbors' house into which Francis broke, was on fire and the precious things Francis took out of the house were children. This information provoked participants to alter their initial understanding and subsequently the impressions they formed based on that understanding.

The Role of Morality in Forming and Revising First Impressions

Most research on first impressions has centered around either being warm, competent, or both. Despite the importance of warmth and competence, they may not be the exclusive foundations upon which impressions are built. In fact, people may identify a person's intentions using information about morality far more than by using warmth or competence information.

Recent work suggests that morality is an equally, if not more, important dimension around which first impressions are formed (Goodwin, 2015). For instance, when warmth traits are divided into "moral and warmth" traits, participants form more positive impressions of moral targets than of targets who were only warm. Further, when people evaluate influential others, traits such as "honesty", which imply only morality, are more important for the formation of positive impressions than are traits like "kindness", which combine morality *and* warmth, or traits like "happy" that only imply warmth (Goodwin, 2015). Additionally, when participants are asked what traits would help form an impression of a stranger, people report that they would like to know if they are sincere and trustworthy (moral qualities) more so than whether they friendly or helpful (warm traits; Brambilla et al., 2011).

Not only do people appear to base their first impressions heavily on moral information, moral information also appears highly influential for updating first impressions. After forming a negative moral impression of an individual, people will positively revise their impressions when they are given a positive moral information and vice versa (Brambilla et al., 2019). However, revising moral impressions negatively appears to be easier than revising moral impressions positively. For example, in one study, participants changed their impressions of a target more when they learned new negative moral information than when they learned new positive moral information (Siegel et al., 2018).

However, in the research done to this point, participants have been given information pertaining only to the ethic of avoiding harm. Indeed, in most of the work exploring how morality is involved in the formation and revision of first impressions, morality has been treated as a product of this single moral consideration. However, not all moral judgments are made on the same grounds.

Moral Foundations

Moral Foundations Theory is a theory of moral psychology grounded in the assumption that moral judgments are formed from the consideration of five moral domains (Haidt & Graham, 2007). Two of the five moral foundations are considered the Individualizing Foundations and the other three are designated as the Binding Foundations. The Individualizing Foundations are Harm and Fairness and they emphasize the importance of concern and respect for other individual people's rights (Kivikangas et al., 2021). The other three foundations prioritize the well-being of groups. These Binding Foundations of Loyalty, Authority, and Purity emphasize the community by guiding others' social interactions.

Each individual foundation involves separate moral concerns (Haidt & Graham, 2007). The Harm/Care foundation entails the moral sensitivity to feel compassion towards the suffering of others. Most all societies endorse the Harm/Care foundation as most people value compassion and dislike cruelty. The Fairness/Reciprocity foundation involves a sense of fair play and the virtue of justice. Even in non-egalitarian societies, people prefer others to treat one another equally. Ingroup/Loyalty concerns involve the drive to trust members of one's own group and distrust members outside the group. Those who endorse this foundation favor people who help the ingroup and have distain for those in the ingroup who do not help their peers. The Authority/Respect foundation involves the admiration and support of authority in dominant

individuals' and in those who are expected to protect others. Those who endorse this foundation dislike antisocial sentiments of disobedience and favor those who they believe to be legitimate authorities. The Purity/Sanctity foundation is driven by disgust, which helps to guard the body from disease. This often facilitates religious thinking or dislike of anything that can seem impure.

People vary in the degree to which they endorse these foundations. For instance, there is reliable trend wherein political ideology varies with moral foundation endorsement. Political liberals appear to endorse the individualizing foundations more than the binding foundations. Political conservatives, conversely, endorse all five foundations about equally (Graham et al., 2009). While most everyone endorses the Harm/Care and Fairness/Reciprocity foundations, the Binding Foundations vary more widely among people. For example, Frimer et al., (2013), picked some of the most famous historical figures and had self-identified liberals and conservative scholars rank them according to their morality. Liberals tended to rank authority figures, such as Margret Thatcher, lower than did their conservative counterparts. Likewise, liberals rated those who opposed authority, such as Rosa Parks, higher than did conservatives.

Interestingly, these political moral differences even find their ways into religious teachings. For example, in one study, researchers examined the words used at churches that varied on the political spectrum (Graham et al., 2009). They found that the most liberal churches spoke of issues of Harm/Care and Fairness/Reciprocity more so than they spoke of other moral foundations, while conservative churches spoke more often about Authority/Respect and Purity/Sanctity.

Further, moral foundations correlate with the life history strategies that people adopt (Gladden & McLeator, 2018). Psychological research examining Life History Theory has revealed that slow-life strategists, who are reared with relatively stable childhoods, who put off

sexual activity to later in life, and who are more future-oriented, tend to endorse all five moral foundations and lean politically conservative. Fast life strategists, on the other hand, who had generally unstable childhoods, engage in sexual activity sooner, and have relatively short-term goals tend to endorse the Individualizing Foundations more so than the Binding Foundations, and tend to self-identify as politically liberal.

Current Research

People calculate an initial impression with the limited information they have. They categorize a new person based on the schemata activated in memory and the circumstances in which the new person finds themselves (if known). Although information pertaining to others' warmth and competence are paramount, some of the research suggests that people assess morality the most when forming impressions.

Further, first impressions can be revised, but, only if new information is believable, highly diagnostic, or triggers a reinterpretation of the original information. Studies have shown that some people will revise an impression based on highly diagnostic moral information. Interestingly, however, although morality differs between societies and between the people within those societies, much of the research has centered on updating impressions given information pertinent to only one type of moral foundation.

Most people subscribe to the Individualizing Foundations; however, people differ more widely in their endorsement of the Binding Foundations. For instance, conservatives and liberals differ the most in how relevant they consider Authority/Respect, Ingroup/Loyalty, and Sanctity/Purity concerns to be (Graham et al., 2009). Of these binding foundations, those who identify as strongly conservative endorse the Authority/Respect foundation more than all other foundations.

I plan to use information pertinent to the Individuating Foundations to create a positive moral first impression of a target. As most people subscribe to the Individualizing Foundations (e.g., Harm/Care or Fairness/Reciprocity foundations), providing positive information about a target's adherence to these foundations should lead most participants to form a positive moral first impression of the target. However, in order to take advantage of the variation in people's endorsement of the Authority/Respect foundation, I plan to attempt to provoke participants to update their impressions of the target by presenting some with new information concerning a violation of the Authority Foundation. I suspect that this would only happen to the extent that they endorsed the foundation to which the new moral information was related.

Method

Participants

The study was advertised on Amazon's MTurk in July of 2021. MTurk is a crowdsourcing platform that allows researchers to recruit a sample of participants and distribute surveys. Participants were compensated up to $1.00 for their participation in the survey. I attempted to recruit 240 participants and a total of 217 completed the survey. Of that sample, 177 American, English speaking participants (M_{age} =37.30, SD=10.59) met the inclusion criteria. Two participants were cut from the final analysis due to duplicate IP addresses, and 21 participants did not finish the survey. Participants received 11 attention checks throughout the survey and had to successfully pass 70% of the attention checks to be included in the analysis. Seventeen participants did not pass 70% of the attention checks.

Apparatus

All surveys and prompts were administered using Qualtrics. Qualtrics is an online site that allows researchers to make and distribute surveys.

Materials

Moral Foundation Endorsement

The Moral Foundation Questionnaire (MFQ) was used to measure the extent to which participants endorse the five moral foundations. The first 15 questions (Part 1) prompted participants with "When you decide whether something is right or wrong, to what extent are the following considerations relevant to your thinking?". Each of the following items assessed the relevance of one consideration (e.g., 'Whether or not some people were treated differently than others'). Participants responded using a Likert-type scale with anchors of 0 (not at all relevant) to 5 (extremely relevant). After aggregating scores on items written to assess each foundation, higher scores indicated greater endorsement of each moral foundation (see Appendix A).

Part 2 of the MFQ prompted participants with "Please read the following sentences and indicate your agreement or disagreement". The questions included one moral statement (e.g., 'Justice is the most important requirement for society') and participants indicated their agreement using a Likert-type scale anchored with 0 (strongly disagree) to 5 (strongly agree). Like Part 1 of the MFQ, after aggregation, higher scores indicated greater endorsement of each moral foundation.

First & Final Impressions

To measure participants initial impressions and to assess the extent to which they update those first impressions, participants received six initial pieces of information about a target, ostensibly named Michael Robinson. Participants then completed an Explicit Attitude Evaluation

(EAE). They completed a second and final EAE after receiving new information meant to elicit impression updating (see Appendix B).

For each of the EAEs, participants indicated how likeable they believe Michael Robinson is using a Likert-type scale from 1 (very unlikable) to 7 (very likeable). In addition, participants rated their evaluations of Michael Robinson on other dimensions, including bad-good, mean-pleasant, disagreeable- agreeable, uncaring-caring, and cruel-kind. They did this using 7-point Likert-type scales which use similar anchors (e.g., 1-very bad to 7-very good, etc.). The score from these five items was aggregated to form a composite score on which higher numbers indicate that they evaluate Michael Robinson more positively. The EAEs contained one attention check question each that asked the participant to select a specific measurement for a nonsense question.

Moral Impression Updating Manipulation

To lead participant to form an initial positive impression, similar to Rydell et al., (2006), all participants read six sentences about Michael Robinson that contain both positive and neutral information about acts that he performed (see Appendix C. Two of the sentences indicated that he performed a positive act associated with the Harm/Care foundation, and two sentences described positive acts that he performed associated with the Fairness/Reciprocity foundation. Two of the sentences contained neutral information about acts Michael Robinson performed that are morally irrelevant. The participants received two attention checks asking if Michael Robinson had or had not performed a particular behavior.

After providing their initial impressions, participants received six additional pieces of information about Michael Robinson, framed as acts performed by the target. The type of information differed depending on whether participants are randomly assigned to the Negative

Authority Condition or the Neutral Condition. For those assigned to the Negative Authority

Condition, three of the six sentences suggested that Michael Robinson performed authority-

violating acts. These pieces of information are adapted from Clifford et al., (2015; see Appendix

C. The remaining three (of six) sentences attributed new, neutral acts to Michael Robinson.

These pieces of neutral and negative authority information were presented in random order. For

those assigned to the Neutral Condition, only new, neutral acts were attributed to Michael

Robinson. Finally, the participants received two addition attention checks asking if Michael

Robinson had or had not performed a particular behavior.

Procedure

After providing informed consent, participants provided demographic information. Then

they were directed to take the MFQ. Next, they were introduced to Michael Robinson for the first

time. After reading the initial information about Michael Robinson, participants completed the

first EAE.

Then, participants were given new information about Michael Robinson. Participants

were randomly assigned to learn that Michael Robinson violated the Authority Foundation (i.e.,

the Negative Authority Condition) or not (i.e., the Neutral Condition). Participants then

completed the second EAE. Finally, participants were debriefed, thanked for their time, and

dismissed.

Figure 1

Overall Organization and Design of Experiment
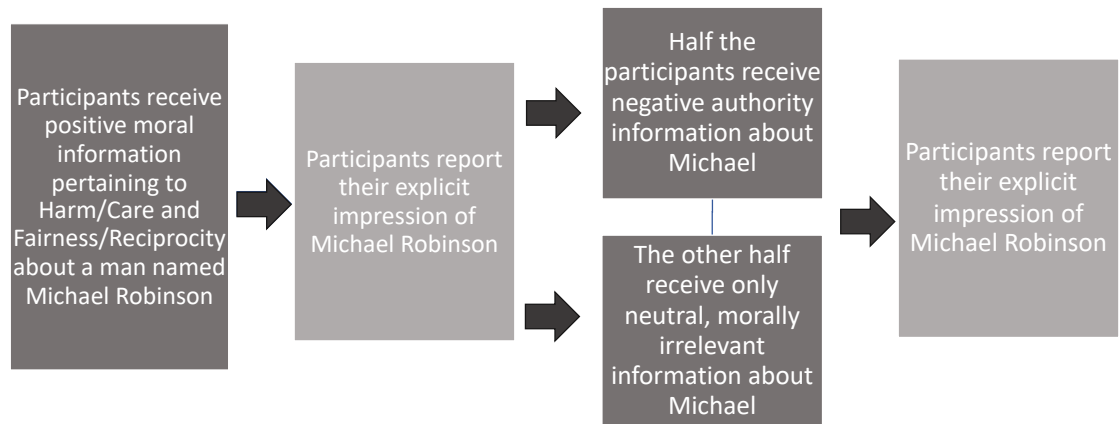
Results

Data Preparation

Reliability analyses revealed that both EAE's were reliable (Time 1: Cronbach's α = .85, Time 2: Cronbach's α = .90, respectively), as were the Authority endorsement subscale of the MFQ (Cronbach's α = .85). To assess if participants would be inclined to report similar answers in Time 2's EAE in relation to Time 1's EAE, I added a Public Self-Consciousness Scale. A reliability analysis revealed that this subscale was also reliable (Cronbach's α = .85).

Preliminary Analysis

First, I examined the typical impression updating effect whereby I expected to see a difference in impressions between those who received new diagnostic information and those who did not at Time 2 but see no such difference at Time 1. To examine for a pattern, explicit attitudes towards Michael Robinson were analyzed at both Time 1 and Time 2. Specifically, a 2 within-subjects (Time: Time 1 versus Time 2) x 2 between- subjects (Moral Information:

Negative Authority vs. Neutral) mixed subjects analysis of variance examined whether

participants' impressions of Michael Robinson became more negative at Time 2 (compared to

Time 1) for those who received the negative authority information. The standard deviation and

mean of Time 1 and Time 2 for the Neutral condition and the Negative Authority condition can

be found in Table 1.

Table 1

*Mean and Standard Deviation of EAEs by Condition*

Condition	Time 1 Mean	Time 1 SD	Time 2 Mean	Time 2 SD
Neutral	6.033	0.912	5.842	0.925
Negative authority	5.961	1.051	4.599	1.280

An examination of Levine's test of equality of variances was significant, (p < .001), revealing

that the homogeneity of variance assumption had been violated. Therefore, I examined the

Welch's *F*-statistic to assess the main effect of Moral Information. This analysis revealed a main

effect of Moral Information, $F(1, 175) = 54.456$, $p < .001$.[1] This means the participants'

impressions were lower (more negative) in the Negative Authority Condition than in Control

group. There was a main effect for Time, $F(1,175) = 70.450$, $p < .001$), meaning that Time 2

impressions were lower than Time 1.

Finally, there was an interaction for Time and the Moral Information Manipulation, $F(1, 175) = 40.122, p < .001$). To explore this interaction, a post hoc analysis was performed to examine whether the simple effect of the manipulation was present at each time. This analysis revealed that it was not present at Time 1, $F(1, 175) = 0.23, p = .630, \eta_p^2 = .00$. Participants in the Negative Authority Condition did not differ in their impressions of the target at Time 1 from those in the Control group. However, the simple effects of the manipulation was present at Time 2, $F(1, 175) = 54.46, p < .001, \eta_p^2 = .24$. Impressions became more negative over time for the Negative Authority condition than the Control Condition. This data conceptually replicated the pattern found in Mann and Ferguson (2015) where when given negative diagnostic information people updated their impressions in a negative direction. A representation of the main effect of Time and the main effect of Moral Information Condition can be found in Figure 2.

Figure 2

*Mean Impression by Time in Moral Information Conditions*
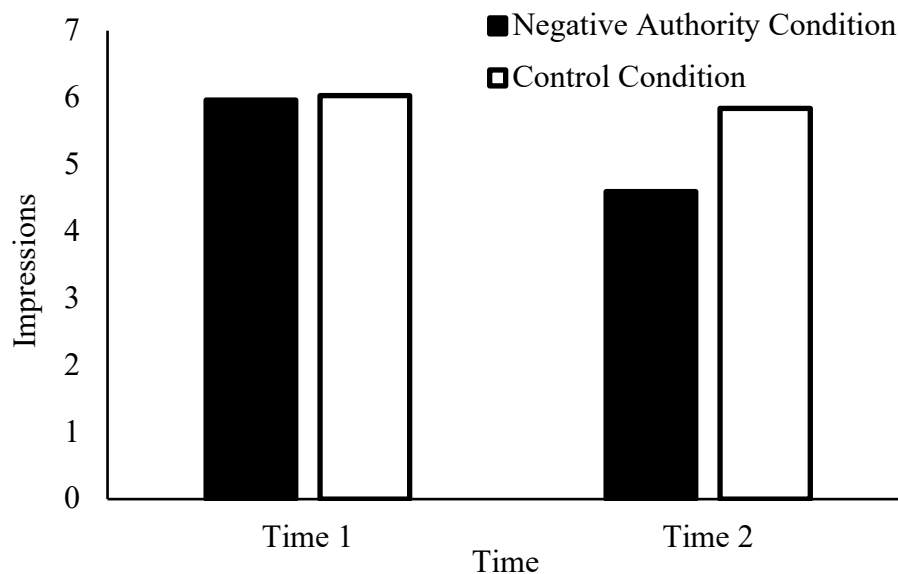
Main Analysis

First, to ensure that there were no a-priori differences between those in each of my conditions, a linear regression was preformed to examine if Moral Information was related to Time 1 impressions. As expected, this analysis revealed no such effect, $\beta = -.036$, $b = -.071$, $SE = .148$, $t(176) = -.483$, $p = .630$. To examine my main hypothesis that people will revise their first impression to the degree in which they endorse the Authority foundation, I regressed participants' Time 2 impressions (i.e., EAE2 responses) on their endorsement of the authority foundation (centered), the Moral Information condition to which they were assigned (dummy-coded), and their interaction using a hierarchical regression. In step 1, the dummy-coded Moral Information Conditions and participants' centered authority endorsement was entered as predictors of participants' Time 2 impressions of Michael. In step 2, the interaction between the authority endorsement and condition was entered.

The main effect of the authority endorsement on Time 2 was not significant, $\beta = .062$, $b = .067$, $SE = .071$, $t(176) = .937$, $p = .350$ This indicates that participant's authority endorsement had no relationship with their evaluations of Michael Robinson averaged across Moral Information condition. The main effect of the Moral Information condition at Time 2 was significant, $\beta = -.488$, $b = -1.245$, $SE = .169$, $t(176) = -7.391$, $p < .001$. Participants had lower evaluations of Michael in the Negative Authority Condition at Time 2 than did the Control Group. The interaction of authority endorsement and Moral Information condition was not significant, $\beta= .034$, $b= .050$, $t(176) = .345$, $p = .730$. Participants' authority endorsement did not interact with Moral Information. Therefore, the effect of Moral Information was present regardless of participants' authority endorsement. A representation of the mean impression of the Moral Information conditions at Time 2 can be found in Figure 3.

Figure 3

Mean Impression of Moral Information Conditions in Time 2
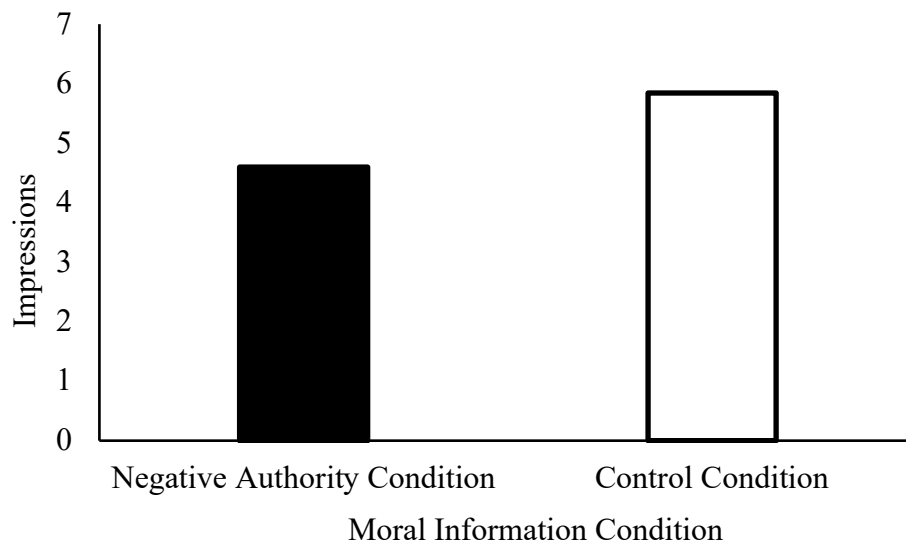
Exploratory Analysis

A three-way interaction was preformed to determine if self-consciousness altered the observed relationship, however, the three-way interaction was not significant, $\beta = .038$, $b = .056$, $SE = .163$, $t(176) = .343$, p $= .732$. Self-consciousness did not change the observed pattern of effects.[2]

Discussion

The results of this study found that people do revise their impressions based on Authority-violating information. The manipulation of negative authority information resulted in more negative impressions at Time 2. However, endorsement of the authority foundation did not have a main effect, nor did it moderate the effect of the negative authority information manipulation. It seemed whether participants endorsed the Authority Foundation or not

influenced how they viewed Michael Robinson's Authority-violating acts. There could be several reasons for not finding the expected pattern. First, all participants may have endorsed Authority to some degree. It is possible that any amount of endorsement of Authority is enough to make the Authority-violating actions morally diagnostic.

Second, it is possible that people did not indicate the extent to which they actually use Authority information on the Moral Foundations Questionnaire. The Moral Foundations Questionnaire only reported explicit endorsement of each foundation and people might be inclined to report answers they have learned are most appropriate. Indeed, Haidt (2013) may have argued that everyone *uses* the Authority foundation, and the other Binding Foundations, but may not have explicitly report endorsing it, as some (e.g., liberals) may have learned to dismiss their Authority-relevant inclinations. Therefore, all participants may have been influenced by the negative authority information possibly leading to the formation of more negative impressions. However, some participants may not have necessarily considered the Authority-violations to be moral in nature.

Further, prior studies have shown that people can hold different implicit and explicit impressions of a target at the same time (Rydell et al., 2006). Research from Rydell et al., (2006) showed that people would more easily update their explicit impressions based on new explicit information while implicit impressions are subjected more to subtle cues. Further, people's explicit impressions could change with far less counter-attitudinal information than could implicit impressions. Therefore, this may have led everyone to update their explicit impression of Michael given the negative authority information, but the expected moderation pattern whereby endorsement moderates the effect of the violation information on people's impressions may have otherwise differed if I had implicitly measured their impressions of Michael. As

implicit impressions are measured by using time sensitive behavioral measures, it is possible that

someone's true impression after having received new information could be measured implicitly.

This may differ from an explicit report of their impressions which may be filtered through

various social desirability and other motivated screenings and thus altered. In further studies,

implicit impressions could be measured to explore whether implicit moral impressions are as

malleable as explicit moral impressions given new moral information.

      The presence of differences in implicit and explicit moral impressions would also speak

to a current debate concerning the automaticity of the binding foundations. One study found

when cognitive resources are depleted the binding foundations were less valued, suggesting that

endorsement of the binding foundation requires self-regulation (Wright & Baril, 2011).

Conversely, there are studies that suggest no differences in the automaticity of individualizing or

binding moral foundations (Alper & Yilmaz, 2020). More research in this field must explore if

the binding foundations or the individualizing foundations are more core to human morality

regardless of cultural influences. If people were given information that a target has violated a

binding foundation, and then update only their explicit moral impressions, this would suggest

that the binding foundations are indeed relatively more controlled. However, if people update

their explicit and implicit moral impressions when given information that a target has violated a

binding foundation, this would then be inconsistent with the binding foundations being relatively

more controlled.

      Further, the EAE did not ask if the action performed was morally wrong. The EAE asked

people's impressions of a target on seven scales that do not explicitly reference morality. Many

people could have a negative impression because Michael did something unusual or socially

taboo, but those who did not highly endorse authority may still believe he did not do anything morally wrong. Future research would be necessary to explore this possibility.

In addition, it was unknown what participants would remember about Michael Robinson after one- or two-weeks' time. In this study, participants immediately evaluated the target after new information was given; however, I am unsure how lasting the impressions would be. Mann and Ferguson's (2015) work suggested that implicit impressions can persist for three days after learning counter-attitudinal information. Arguably, the most diagnostic information, the information that indicates the true character and moral nature of the individual, is the information that stays for a week or longer (Tolderov & Uleman, 2004). Humans' survival depended on a discerning memory indicating whether or not to trust strangers and acquaintances. Therefore, one could reasonably suspect that people would retain this important moral information, in case they came across the strangers in the future (Fiske, 2008). In future studies, I would expect that people would, for the most part, retain their updated impression indefinitely because the information is moral in nature.

Limitations

This experiment solidified current theories in impression research; however, it did contain limitations. Ideally, 200 participants would have produced a medium effect size and I was only able to use 177 participants. If this study was recreated, more participants would need to be recruited to increase the power. Secondly, explicit evaluations may not have been the best way to truly assess someone's true feelings towards those who committed authority. An implicit evaluation could be used to determine authority endorsement. The EAEs used in this study could also explicitly ask if something was moral. Lastly, the Authority-violating acts Michael Robinson performed were not tested on a population prior to this experiment to ensure the

validity of the manipulation as Authority-violating. Rather they were designed based on descriptions of the authority foundation. Validating these or using validated acts would benefit future research.

Conclusions

This study was the first to explore how people update their impressions based on the extent to which they endorsed a particular Moral Foundations. Previous impression research had not isolated an explicit moral foundation and tested which type of information leads people to update their impressions. Though I did not find an interaction between authority endorsement and participants' impressions of a target after receiving information about the target performing Authority-violating acts, I confirmed Mann and Ferguson's (2015) pattern of revising impressions based on negative moral information. Further studies could contribute to impression research by adding precision to our understanding of when certain types of moral information are diagnostic.

Footnotes

[1]The assumption of homogeneity of variances was violated for Time 2 (Levene's test only significant for Time 2, 13.683, $p < .001$) but a Welch's corrected F test revealed that this remained significant despite the violation of the assumption, $F(1,175)= 54.456$, $p < .000$.

[2]The reported effects were also unchanged when statistically controlling for public self-consciousness.

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Appendix A
Moral Foundations Questionnaire

Part 1. When you decide whether something is right or wrong, to what extent are the following considerations relevant to your thinking? Please rate each statement using this scale:

[0]	[1]	[2]	[3]	[4]	[5]
Not at all relevant	__ Not very relevant	__ Slightly relevant	__ Somewhat relevant	____ Very relevant	__ Extremely relevant

1. Whether or not someone suffered emotionally
2. Whether or not some people were treated differently than others
3. Whether or not someone's action showed love for his or her country
4. Whether or not someone showed a lack of respect for authority
5. Whether or not someone violated standards of purity and decency
6. Whether or not someone was good at math
7. Whether or not someone cared for someone weak or vulnerable
8. Whether or not someone acted unfairly
9. Whether or not someone did something to betray his or her group
10. Whether or not someone conformed to the traditions of society
11. Whether or not someone did something disgusting
12. Whether or not someone was cruel
13. Whether or not someone was denied his or her rights
14. Whether or not someone showed a lack of loyalty
15. Whether or not an action caused chaos or disorder
16. Whether or not someone acted in a way that God would approve of

Part 2. Please read the following sentences and indicate your agreement or disagreement:

[0]	[1]	[2]	[3]	[4]	[5]
Strongly disagree	Moderately disagree	Slightly disagree	Slightly agree	Moderately agree	Strongly agree

17. Compassion for those who are suffering is the most crucial virtue.
18. When the government makes laws, the number one principle should be ensuring that everyone is treated fairly.
19. I am proud of my country's history.
20. Respect for authority is something all children need to learn.
21. People should not do things that are disgusting, even if no one is harmed.
22. It is better to do good than to do bad.

23. One of the worst things a person could do is hurt a defenseless animal.
24. Justice is the most important requirement for a society.
25. People should be loyal to their family members, even when they have done something
    wrong.
26. Men and women each have different roles to play in society.
27. I would call some acts wrong on the grounds that they are unnatural.
28. It can never be right to kill a human being.
29. I think it's morally wrong that rich children inherit a lot of money while poor children inherit
    nothing.
30. It is more important to be a team player than to express oneself.
31. If I were a soldier and disagreed with my commanding officer's orders, I would obey anyway
    because that is my duty.
32. Chastity is an important and valuable virtue.

Appendix B
Explicit Attitude Evaluation

Please rate Michael Robinson on the following impression:

	Extremely unlikeable	Moderately unlikable	Slightly unlikable	Neither unlikeable or likeable	Slightly likeable	Moderately likeable	Extremely likeable
How unlikable or likable is Michael Robinson?	○	○	○	○	○	○	○

Q41 Please rate Michael Robinson on the following impression:

	Extremely bad	Moderately bad	Slightly bad	Neither bad nor good	Slightly good	Moderately good	Extremely good
How bad or good is Michael Robinson?	○	○	○	○	○	○	○

Q37 Please rate Michael Robinson on the following impression:

	Extremely mean	Moderately mean	Slightly mean	Neither mean nor pleasant	Slightly pleasant	Moderately pleasant	Extremely pleasant
How mean or pleasant is Michael Robinson?	○	○	○	○	○	○	○

Q38 Please rate Michael Robinson on the following impression:

	Extremely disagreeable	Moderately disagreeable	Slightly disagreeable	Neither disagreeable or agreeable	Slightly agreeable	Moderately agreeable	Extremely agreeable
How disagreeable or agreeable is Michael Robinson?	○	○	○	○	○	○	○

Q39 Please rate Michael Robinson on the following impression:

	Extremely uncaring	Moderately uncaring	Slightly uncaring	Neither uncaring or caring	Slightly caring	Moderately caring	Extremely caring
How uncaring or caring is Michael Robinson?	○	○	○	○	○	○	○

Q40 Please rate Michael Robinson on the following impression:

	Extremely cruel	Moderately cruel	Slightly cruel	Neither cruel nor kind	Slightly kind	Moderately kind	Extremely kind
How cruel or kind is Michael Robinson?	○	○	○	○	○	○	○

Appendix C
Moral Impression Information

All participants were told to consider the following points about a man named Michael

Robinson:

Positive Harm/Care Information

You see Michael Robinson help someone parallel park.

You see Michael Robinson plant a tree.

You see Michael Robinson spend time with an elderly person.

You see Michael Robinson gift a fire extinguisher to a neighbor.

You see Michael Robinson donate old towels and blankets to an animal shelter.

You see Michael Robinson foster an animal until a permanent owner can care for it.

Positive Fairness/Reciprocity Information

You see Michael Robinson do his share and help others in a group project.

You see Michael Robinson pay for the food ordered by car behind him in the drive-thru line.

You see Michael Robinson give someone their wallet they just dropped while exiting a store.

You see Michael Robinson let his employee who has finished their work leave early.

You see Michael Robinson tip his waiter 50% of the bill.

You see Michael Robinson leave quarters at the laundromat.

Neutral Information Block 1

You see Michael Robinson shops at the grocery store.

You see Michael Robinson go to the bank.

You see Michael Robinson drink a glass of water.

You see Michael Robinson wear a blue outfit.

You see Michael Robinson sitting on a bench in a park.

You see Michael Robinson part his hair on the left side.

Neutral Information Block 2

You see Michael Robinson fill up his car with gas at the gas station.

You see Michael Robinson walk a half mile.

You see Michael Robinson going to the gym.

You see Michael Robinson attend a conference.

You see Michael Robinson wear white socks.

You see Michael Robinson turn on his porch light.

You see Michael Robinson drive to work.

Negative Authority Information

You see Michael Robinson refuse to stand for a judge when the judge walks into the courtroom

You see Michael Robinson interrupt his boss as the boss explains a new concept.

You see Michael Robinson yelling at his own soccer coach during a playoff game.

You see Michael Robinson disobey his boss when the boss tells Michael to dress professionally.

You see Michael Robinson talk loudly and interrupt the mayor's speech to the public.

You see Michael Robinson tell someone that their professor is a fool after class.

You see Michael Robinson watch sports on his phone during a meeting while superiors are presenting.