



## Need for Cognition as a moral capacity

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### ABSTRACT

Inspired by the increased scientific interest in ethical concerns together with limited previous research on linkages to cognitive motivation, we aimed at clarifying the relation between Need for Cognition (NFC) and self-reported moral behavior. As individuals high in NFC have a propensity to deeper information processing and more elaborated decision-making, we assumed that NFC is associated with higher levels of moral cognition processes and more moral behavior. In two cross-sectional studies, variables of interest were assessed by online surveys with 303 (39% male,  $29.26 \pm 11.09$  years) and 204 participants (26% male,  $27.8 \pm 1.3$  years), respectively. In both studies, NFC predicted self-reported moral behavior and did so incrementally over and above variables clearly referring to morality like moral identity (Study 1) or empathy (Study 2) as well as cognitive reflection. These results highlight the importance to consider NFC in research on moral behavior. Based on our current findings, we introduce a comprehensive approach on dispositions that promote moral behavior and suggest NFC as moral maturation capacity impacting on moral behavior.

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## 1. Introduction

For centuries, philosophers have been concerned with the principles underlying moral judgment and moral behavior. Morality has also attracted the attention of researchers in psychology and related disciplines long before recent events such as the war on terror, the global financial crisis, or the current European migrant crisis have resulted in an increased public and scientific interest in variables underlying moral behavior. A number of theories on moral behavior have been developed, yet, the extent to which intuitive thinking and affective variables on the one hand and deliberative thinking and cognitive variables on the other hand impact on moral behavior is still a matter of debate (Haidt, 2001; Paxton & Greene, 2010). In the present research, we argue for a prominent role of the latter by showing in two studies that cognitive engagement, or more specifically, *Need for Cognition* (NFC; Cacioppo & Petty, 1982) is able to predict self-reported moral behavior over and above variables with a clear moral focus such as moral attentiveness, moral identity or empathy and, thus, qualifies as a potential moral capacity guiding moral thought and action.

### 1.1. Need for Cognition

Cacioppo and Petty (1982) proposed NFC as a dimension of stable individual differences in the intrinsic motivation to engage in and enjoy effortful cognitive endeavors (Cacioppo, Petty, Feinstein, & Jarvis, 1996). There is ample evidence that NFC is a particular useful predictor of individual differences in information processing and decision-making, with high NFC being associated, among others, with an enhanced consideration of information quality, with more adaptive and successful decision-making, or with more thoughtfully developed, more stable, and more readily retrievable attitudes (for reviews, see Cacioppo et al., 1996; Petty, Briñol, Loersch, & McCaslin, 2009). Consistent with this role in information processing, evidence on the relationship between the motivational construct of NFC and classic intelligence and personality constructs suggests that NFC is related to traits that foster effective and efficient information processing: It is, albeit modestly, positively related to both fluid and crystallized intelligence (Cacioppo et al., 1996; Fleischhauer et al., 2010; Hill et al., 2013) and to personality traits related to goal orientation, behavioral activation, and emotional stability (Fleischhauer et al., 2010). While in the original conceptualization, a relation between NFC and moral reasoning or moral behavior was not suggested, it was stated that “individuals high in need for cognition are thought to be more likely to expend effort on information acquisition, reasoning, and problem solving to cope with a wide variety of predicaments in their world” (Cacioppo et al., 1996, p. 199). Thus, it seems likely that NFC also impacts on coping with *moral* predicaments, and we

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will elaborate on evidence in support of this notion after the following introduction of models of moral behavior.

### 1.2. Moral behavior

The classic psychological model of Kohlberg's moral development theory (e.g., Kohlberg, 1984) proposes internal principles as basis for moral behavior and is organized around a hierarchical model of six moral stages. Based on Kohlberg, Rest and colleagues (Rest, 1986; Rest, Narvaez, Bebeau, & Thoma, 1999) proposed a sequential four-component model aiming at a more appropriate illustration of psychological processes: (1) moral sensitivity to recognize an existing moral problem, (2) moral judgment as reasoning about morally correct actions, (3) moral motivation to establish moral intent, and (4) to engage in and persevere with moral actions. Both approaches presume that moral judgments and intentions directly lead the way to moral actions (Kish-Gephart, Harrison, & Treviño, 2010; Rest et al., 1999).

Hannah, Avolio, and May (2011) extended the model by Rest and colleagues and distinguished moral *cognition* from moral *conation* processes. Moral sensitivity and judgment correspond to moral cognition processes, that is, the awareness and the processing of moral issues. Moral conation processes refer to moral motivation and behavior. Hannah et al. (2011) proposed individual capacities that influence these processes: *Moral maturation capacities* enable elaborated storage, retrieval, processing, and integration of moral information, that is, they help to develop more complex cognitions or models with regard to the logic of morality (Hannah et al., 2011). *Moral conation capacities* underlie enacting morally motivated action, that is, they enable a person to feel responsible and to be motivated to take moral action (Hannah et al., 2011). So, while moral maturation capacities should primarily drive moral cognitive processes, moral conation capacities are likely to drive moral motivational processes (Hannah et al., 2011).

Regarding the moral maturation capacities, Hannah et al. (2011) suggest three constructs to be critical in driving moral cognition processes: Moral complexity refers to the assumption that individuals can have more or less complex representations of knowledge domains, which holds for the moral domain, too. A greater complexity in a domain should go along with more differentiated and deliberate representations of a topic leading to a more and deeper elaboration of (in this case) moral issues, helping to deal with moral challenges or dilemmas (see Hannah et al., 2011). As such a complexity in the views and representations requires a certain capacity to process complex moral knowledge, Hannah et al. (2011) propose meta-cognitive ability, that is, the capability to monitor and regulate cognitive processes, as underlying capacity. Third, Hannah et al. (2011) consider moral identity, an individuals' knowledge about him- or herself as a moral actor, as a crucial moral maturation capacity. The authors see that construct as a complex multifaceted structure that comprises not only moral traits (Aquino & Reed, 2002) but also includes aspects like goals, motivation, roles in different situations, or affect. Furthermore, they propose moral identity to impact on moral cognition as well as moral motivation processes (Hannah et al., 2011).

### 1.3. NFC and moral behavior

As mentioned, NFC has not been conceptualized with explicit reference to moral cognition or conation processes, or moral capacities, respectively, and there is only a small number of studies that examined NFC in a moral context. Nevertheless, NFC might qualify as a moral maturation capacity along the lines of the proposal of Hannah et al. (2011) for several reasons apart from the general one given above.

First, Hannah et al. (2011) argue that higher complexity in moral knowledge domains promote moral sensitivity and moral judgment. Indeed, individuals high in NFC prefer complex to simple tasks (Cacioppo & Petty, 1982; See, Petty, & Evans, 2009) and seem to be more prone to allocate attention to complex (albeit task-irrelevant) than to simple

(albeit task-relevant) stimuli (e.g., Enge, Fleischhauer, Brocke, & Strobel, 2008). While NFC-related preferences for task or stimulus complexity cannot readily be equated with more complex knowledge structures that promote moral behavior, there is suggestive evidence that NFC-related judgment in a morally relevant domain is mediated by cognitive complexity: Sargent (2004) found that less support for punitive responses to crime in individuals high in NFC was mediated by their attributional complexity, suggesting that high NFC individuals endorse more complex attributions for individual behavior.

Second, there are reasonable overlaps of NFC with the processes underlying moral complexity. Given its main correlates (e.g., Cacioppo et al., 1996), NFC presents as a promising candidate for a moral capacity sensu Hannah et al. (2011): In line with the assumptions of Hannah et al. (2011) concerning moral complexity, NFC refers to thoughtful, elaborate information processing and a widespread information search focusing on central, task- or topic-relevant information, which should promote the above described development of more differentiated and deliberate representations of a complex moral topic and which should foster the deeper elaboration of moral issues. Additionally, reported links between NFC and goal-oriented traits (Fleischhauer et al., 2010) match processes of moral motivation and can enhance the motivation to implement moral considerations. So, individuals with higher NFC scores are not only able to elaborate deeply and well-founded on a topic, but are also more likely willing to do so than individuals with lower NFC scores.

Third, cognitive reflection – conceptualized as the ability to reflect upon superficially, but falsely correct responses that come immediately into one's mind and to resist them (Frederick, 2005) – already was found to be related to moral judgment: In a study by Paxton, Ungar, and Greene (2012), individuals who reflected more on the Cognitive Reflection Test (Frederick, 2005) made more utilitarian judgments that were less driven by intuitions. Although the correlation between NFC and cognitive reflection is only modest (Frederick, 2005), their conceptual link of referring to the way people process information provides another provisional argument for a role of NFC as a moral capacity. Consistently, Paxton and Greene (2010) pointed out that both of these traits of deliberative thinking promote utilitarian judgment through moral reasoning.

Finally, there is accumulating evidence for NFC fueling moral action: Mussel, Göritz, and Hewig (2013) observed NFC to be associated with behavioral reactions to unfairness in an ultimatum game. Kinnunen and Windmann (2013) found a positive relation between NFC and displayed moral courage in a group situation, and McClaren, Adam, and Vocino (2009) reported higher NFC to directly influence work norms. Furthermore, findings from different studies suggest that different levels of NFC are associated with individual moral attitudes (McClaren et al., 2009) and predict which situational aspects are considered as morally relevant (Singer, Mitchell, & Turner, 1998). Paxton and Greene (2010) noted a positive relationship between deliberative thinking styles like NFC and more utilitarian judgment concluding that controlled cognitive processes support such reasoning.

All in all, although, as mentioned, there are only a few studies that examined NFC in the moral context until now, results from previous research as well as theoretical considerations derived from the correlates of NFC and findings concerning conceptual related traits support the notion of NFC as a moral maturation capacity that enables individuals to more effectively elaborate on moral issues. Thus, we assumed NFC to be related to moral behavior.

Furthermore, we were interested in its incremental validity over established moral variables. In this regard, we initially considered three variables to be relevant, since they have proven to be crucial predictors of moral action (for an overview, Jennings, Mitchell, & Hannah, 2015), namely moral identity (Aquino, Freeman, Reed, Lim, & Felps, 2009; Hertz & Krettenauer, 2015), moral attentiveness (Reynolds, 2008; Reynolds & Miller, 2015), and justice sensitivity (e.g., Schmitt et al., 2009).

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