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# Dirty deeds unwanted: the use of biased memory processes in the context of ethics

Maryam Kouchaki<sup>1</sup> and Francesca Gino<sup>2</sup>

One's dishonest behavior is an unwelcome and unwanted memory and can become relatively inaccessible to consciousness over time. We review research that provides support for the active role that people have in shaping their memory of unethical actions. We argue that in service of social-advancement and self-enhancement, people are likely to use biased memory processes that involve obfuscating the truth so that they can maintain a moral self-image.

## Addresses

<sup>1</sup> Kellogg School of Management, Northwestern University, 2001 Sheridan Road, Evanston, IL 60208, United States

<sup>2</sup> Harvard Business School, Harvard University, United States

Corresponding author: Kouchaki, Maryam  
([m-kouchaki@kellogg.northwestern.edu](mailto:m-kouchaki@kellogg.northwestern.edu))

Current Opinion in Psychology 2015, 6:82–86

This review comes from a themed issue on **Morality and ethics**

Edited by **Francesca Gino** and **Shaul Shalvi**

<http://dx.doi.org/10.1016/j.copsyc.2015.04.003>

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Human memory is a marvelous but fallacious instrument. The memories which lie within us are not carved in stone; not only do they tend to become erased as the years go by, but often they change, or even increase by incorporating extraneous features.

- Primo Levi

Given the pervasive influence of morality and moral systems on the human experience [1], and because morality is such a fundamental part of humans' existence, people are more attentive to information regarding a person's morality than other characteristics such as competence, ability, or warmth [2–4]. Individuals are extremely sensitive to situations that threaten their own moral self-views and show compensatory reactions to past unethical behaviors, such as reporting greater intent to engage in prosocial activities, engaging in less subsequent

cheating, and even physically cleansing themselves — all purportedly in an effort to reassert themselves as moral beings once they transgressed [5–7]. In fact, people even experience behaving inauthentically — acting in ways that are inconsistent with their true self — as immoral behavior that taints their moral self-image [8]. Additionally, for humans as social beings, morality functions to 'suppress or regulate selfishness and make social life possible' [1].

Yet, despite the importance people give to morality, they often behave dishonestly when they have the opportunity to do so, if only by a little bit [9]. Research has suggested that people cheat by a little bit rather than to the maximum extent possible when given the opportunity so that they can benefit from cheating (e.g., by making more money on a task) without having to update their view of themselves as moral individuals. When tempted, however, people often commit transgressions or engage in unethical behaviors that create harm or costs to others. In such cases, people experience guilt and are left with an unpleasant memory of their actions. But do such memories last? As we explain in this paper, individuals are strongly motivated to use biased memory processes that involve clouding the truth in order to maintain a moral self-image — all in the service of social-advancement and self-enhancement. In this paper, we review research that provides support for the active role that people have in shaping their memory of unethical actions. As we discuss, one's past unethical behavior is an unwelcome and unwanted memory that can become relatively inaccessible to consciousness over time.

## Not all memories are equal

For over a century, memory research has examined the passive factors that lead people to forget. This research has suggested that forgetting results from, for example, the decay of memories over time and changes in the environment that create difficulties in recalling past events [10]. As Anderson and Hanslamyr have noted [11\*\*] the emphasis that memory research has placed on passive factors is consistent with the view that forgetting is a negative outcome. As such, any process that can explain why forgetting occurs must be involuntary. This common view is only half correct: forgetting *can* be negative, and often is. But it does not consider the fact that not all experiences we have as we go through life are actually positive or pleasant. When negative experiences or unpleasant events come to mind because we are reminded of them, we are generally not favorably

disposed toward them, and we often go to great lengths in order to avoid thinking for too long about them. Since they are usually unwanted memories, we try our best to eliminate or exclude such memories from awareness [12]. This is a natural human reaction, as we have a desire to maintain positive feelings and a positive attitude toward life, and we are also motivated to protect our sense of self. Therefore, any research on forgetting should consider the various motivations that shape retention [11<sup>••</sup>,12]. Forgetting, then, is motivated. Using a common definition used in the literature, we define motivated forgetting as increased forgetting that results from active processes that down-prioritize unwanted experiences so as to create or sustain an emotional or cognitive state [11<sup>••</sup>]. Table 1 provides a summary of the various motives for motivated forgetting.

### Motivated forgetting of unwanted memories

Memories vary in the extent to which they are welcome in awareness, and some memories can even become relatively inaccessible to consciousness. Memories are attributions we make of a situation based on the subjective qualities of the experience, as well as our motives and goals [13]. Memories can be altered, distorted, even fabricated, to support current aspects of the self [14], thus creating coherence between memories and the self [14,15]. Extensive research provides support for the active role that people have in shaping memory retention (for a review see [11<sup>••</sup>]). People use inhibitory control to prevent unwanted memories, which can reduce explicit recall of such memories and their implicit retrieval [16–18].

Taxonomies of memory systems are divided according to whether memory is consciously accessible or not [19] or categorized by memory content and properties [20]. The

first typology focuses on implicit memory or so-called non-conscious memory as compared to explicit memory [21,22]. Individuals retain two types of information in memory: (1) information that they can consciously recollect through explicit retention (memory accompanied by the phenomenological awareness of remembering) such as free recall and recognition, and (2) information they have no conscious recollection (memory without the associated awareness of memory retrieval), assessed through implicit retention such as word-fragment identification and word-stem completion.

Another typology of memories distinguishes between declarative memory (also known as explicit memory), either semantic or episodic, and procedural memory (also known as implicit or nondeclarative memory [23]). Semantic memory contains conceptual and factual knowledge (facts about the world), while episodic memory refers to a subjective experience of remembering past events in the context in which it originally occurred (with some reference to oneself as a participant in the episode). Procedural memory, on the other hand, allows us to learn skills and acquire habits, which help us carry out activities (such as driving a car) without needing to be able to recall said skill explicitly.

When it comes to the different memory distortion processes in service of self-enhancement and social-advancement, we believe, episodic memory is the primary focus because it is oriented to the past and the memory system that allows people to re-experience past experiences [24]. Even though human memory is often reliable and accurate, it is also fallible [12]. Remembering can fail or memory can be distorted due its functionality for survival and flourishing in the social environment [25]. As noted, for both social and personal reasons, morality is

**Table 1**

#### Motives that can lead to motivated forgetting.

Type of motive	Explanation
Regulating negative affect	Memories triggering negative emotions, such as fear, anger, shame, guilt, anxiety, sadness and embarrassment lead people to regulate their emotions by suppressing these problematic memories
Justifying inappropriate behavior	When people engage in unethical behavior, they experience distress and discomfort due to the conflict between their behavior and their desire to be moral. People use motivated forgetting to reduce this distress and discomfort
Maintaining beliefs and attitudes	People often do not update their beliefs based on contradictory evidence. This resilience may be enhanced or supported by the selective forgetting of information that is against one's beliefs
Deceiving others and oneself	Motivated forgetting and memory inhibition may contribute to the creation of false beliefs, which are the basis of deception of others as well as oneself
Preserving self-image	People protect their self-image by selectively remembering information regarding positive traits and forgetting feedback that threatens their sense of self
Forgiving others	Memory inhibition has been argued to be central in helping people overcome rumination about transgressions and offenses committed by others
Maintaining attachment	Behaviors that encourage good relations or attachment to other individuals may motivate selective remembering of experiences compatible with attachment, and forgetting of incompatible ones — as attachment to a parent, authority figure or guardian is another important human motivation

Note: This table was adapted from Anderson and Hanslamyr [11<sup>••</sup>].

fundamental to human beings, and thus inhibition of memory can be engaged either during memory encoding (when the input is converted into a construct that can be stored within the brain), or retrieval (subsequent re-accessing of events or information from the past, which have been previously encoded and stored in the brain) to limit retention of information that challenges a person's moral self-views. Immoral actions are a particular category of negative experiences from our past: not only we are negatively disposed toward them, but also they speak to a very central aspect of our self-concept.

### Memory of immoral actions from the past

We expect people to employ a variety of biased memory processes to limit retrieval of information that challenges their moral self-views. At a basic level, people can selectively attend to information [26]. Studies have demonstrated that when processing personal information, positive information (e.g., traits such as 'kind') is more readily recalled than negative information (e.g., traits such as 'dishonest'), but not when it is related to another person [27,28]. Focusing on memories pertaining to one's morality, arguably, there are numerous ways in which people can selectively retain memories, block access to certain memories, or even distort them altogether. One possibility is through replacing truth in conscious memory, with a deception whereas the individual continuously and actively reports the misinformation as truth. Due to both social and individual negative consequences of lying, people can practice the act of deceiving and often they take their practice literally and rehearse their lies mentally [29]. This conscious rehearsal of misinformation can lead the person to actually believe the inaccurate depiction of events as indeed the truth [30,31]. Even though a person may start with the initial admission of the misinformation, through this intentional directed forgetting, it later becomes very difficult to distinguish false memories from true ones [32,33]. One consequence of rehearsing, and telling lies is that they may even start to recollect those lies as if they actually happened [34].

Even if individuals do not intentionally forget unwanted information and accept it at the time, there is no guarantee that this information can be retrieved at a later time. In fact, information inconsistent with one's preferences, goals, and self-concept can simply be forgotten or misremembered later as preference-consistent or neutral. Empirical studies have tested memory for a specific threat-related stimulus and have shown that people may forget the details of a threatening situation that is central to their self-concept [27]. For instance, Dalton and Huang [35] demonstrated that social identity threat (i.e., negative identity-related feedback) motivated people to subsequently forget identity-linked marketing promotions but not neutral materials. Furthermore, research has provided evidence for motivated forgetting of ethical standards. Shu and Gino [36\*] found that acting

dishonestly motivates people to forget moral rules (e.g., a code of ethics) they were exposed to before having the opportunity to cheat. This research provides evidence that the psychological discomfort stemming from unethical deeds, after being exposed to moral rules, increases individuals' motivation to forget ethically relevant information from their memory.

Multiple paradigms used in controlled laboratory studies, such as directed forgetting, thought substitution, and retrieval suppression forgetting, provide strong evidence for the possibility of incidental forgetting [11\*\*]. Laboratory studies examining memory-related brain activity show that when presented with reminders of a crime, guilty participants' efforts to suppress retrieval was successful such that their brain activity was indistinguishable from those exhibited when they were innocent [37]. Moreover, the conscious suppression of memories of their crime, also limits subsequent automatic influences of these memories [38\*]. In sum, suspects can intentionally suppress memories of a crime when actively being questioned. However, it is important to note that this does not necessarily mean that the targets do not have the crime-related memories stored in their brain, rather that they have the ability to not remember a crime at *that specific time*.

Research provides support for the possibility of actively forgetting. However, to better understand maintenance of a moral self-concept as a motive, we need to step away from controlled materials and instructed forgetting, toward autobiographical experiences. Autobiographical experiences are unique to individuals and thus can capture the motivations that people have for suppressing unwanted memories that can shape retention of these personal experiences. More recently, a set of studies examined individuals' autobiographical memories, which indicate that people may have clear memory for the details of their unethical acts short term, but in the long term, have a very poor memory for the same event [39\*]. Kouchaki and Gino [39\*] propose that after engaging in unethical behavior, individuals remove these actions from memory over time in reaction to the psychological distress and discomfort they cause. Across seven studies, they find that engaging in unethical behavior motivates real changes in memory, such that memories of unethical actions are gradually less clear than those of ethical actions — a loss of memory they call *ethical amnesia*.

As their work suggests, memories concerning one's unethical acts in the long term may have been blocked or distorted due to one's motivation to support a positive moral self-view. This type of memory bias has been documented in recollection of daily experiences, such that people have better recollection of their own moral acts as opposed to immoral acts but do not show this bias in their recall of the actions of others [40]. In sum, this

research is in line with past work demonstrating that people are able to purge their memories of inconvenient truths [41,42]. One's unethical acts will be less probably to be vividly remembered as compared to negative events because unethical actions constitute a threat to one's self-concept as morality is central to individuals' self-conception.

## Conclusion

We reviewed research on memory and mechanisms of forgetting and memory distortion and discussed how acknowledging the fundamental role of morality in self-enhancement and social-advancement help us better understand why memories of one's morally questionable acts are unwelcome and people limit the time they spend thinking about these experiences and forget them easily.

## Conflict of interest statement

The authors wish to confirm that there are no known conflicts of interest.

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