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Current Opinion in Psychology

Deliberate honesty

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Studies on lying, especially on inhibiting honest responses and generating dishonest responses, suggest that honesty is the default behavior and dishonesty requires deliberate effort. Here, we argue that when lying serves self-interest, that is, when lying is tempting and lies are easy to craft, honesty may require deliberation. We review studies that support this view showing that in tempting situations decreasing the level of self-control increased dishonesty, while encouraging contemplation and reflection increased honesty.

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Deliberate honesty

Honesty at first glance may be considered the default response. To craft a lie, it stands to reason; people need to make a deliberate effort. Here we argue that when lying serves self-interest, that is, when lying is tempting, honesty may require deliberation. When going to a show with your kid who just turned five a few days ago, and being asked by the ticket seller 'is your kid younger than five, because if so he can enter for free', is people's immediate response to be honest? Or perhaps will people lie and wrongly confirm that the kid is younger than five, to save a few dollars? That is, is honesty automatic or deliberate?

By dishonesty we refer to any behavior that deviates from the truth. We adopt a dual process model to understand dishonesty. According to this model, decision processes may be seen as resulting from the interplay between intuitive (system 1) and deliberative (system 2) processes. The intuitive system is generally described as fast, automatic, associative in nature, and requires minimal cognitive resources. In contrast, the deliberative system is slow, deliberately controlled, analytical, and requires cognitive resources [1,2,3••]. Based on recent behavioral ethics and social psychological findings we suggest that in tempting situations, when anonymity is preserved and there is almost no risk of being caught, people's automatic response is to serve their self-interest, even when it requires lying. Only with deliberation, people turn (relatively) honest, especially when they cannot come up with a justification for lying.

Here, it should be noted, we focus on tempting situations. Previous studies on lying, and especially inhibiting honest responses and generating dishonest responses, indicate that dishonesty is more cognitively demanding than honesty. It is associated with longer reaction times [4,5], with the activation of frontal executive brain areas [6••], and requires more executive control than telling the truth [7]. These studies, however, mainly instructed participants to lie or to tell the truth. That is, lying in these studies was not incentivized or tempting [8]. Here, we focus on lies that emerge in tempting and incentivized situations.

Self-control and honest behavior

In ample occasions people can behave dishonestly in order to serve their self-interest. Some occasions present opportunities for small gains, others for substantial ones. Examples range from not admitting receiving more change than deserved in a restaurant, declaring a lower income when filing annual tax forms, or even committing fraud involving millions of dollars. In these situations, individuals face a motivational conflict between the temptation to behave dishonestly for selfish gains and the desire to act in a socially appropriate manner. The ability to resist temptation requires self-control (also termed cognitive control). Self-control can be defined as 'the overriding or inhibiting of automatic, habitual, or innate behaviors, urges, emotions, or desires that would otherwise interfere with goal directed-behavior' [9]. Accordingly, if honesty depends on *self-control* and on the level of *temptation*, then the situational state (as well as individual differences) of one's capacity for self-control and the level of temptation should influence the way people respond to opportunities to be dishonest.

Depletion leads to dishonesty

Different approaches have been used to examine the role of self-control in shaping ethical behavior. One prominent approach draws on the strength model [10••]. According to this model, self-control relies on a limited resource that gets depleted when one tries to inhibit competing behaviors, urges, or desires, just as a muscle tires after performing an effortful action. As a result, an initial act of self-control impairs subsequent acts of self-control, even

in unrelated tasks; this state is called *ego-depletion* [11,12]. It has been shown that individual differences in self-control predict dishonesty in a problem solving task, and so did temporary depletion of self-control [13]. Depleted participants tended to overstate their performance in order to gain more money than did non-depleted participants [14]. Moreover, depleted participants were more likely than others to expose themselves to tempting situations and subsequently take advantages of the opportunities they have exposed themselves to, in order to gain undeserving money [14]. It has been suggested that when self-control is depleted, people do not have enough cognitive resources to recognize the moral component of the decision they are facing, and thus give in to the temptation to cheat [15••].

Since depletion leads to dishonesty, lack of sleep was suggested as a potential contributor to reduced self-control and consequently to unethical behavior. Indeed, when the opportunity and the incentive to cheat existed, sleep deprivation was associated with high levels of unethical behavior in the lab, as well as in work-related settings. This relation was mediated by cognitive fatigue, a proxy for ego depletion [16]. Furthermore, sleep-deprived people have difficulty to see the moral implications of their behavior and to refrain from unethical behavior [17••]. Recently Kouchaki and Smith [18] suggested that the more tired they get during the day (from morning to evening), the less people able to resist moral temptations. They found that people engaged in less unethical behavior (e.g., they lied less) in the morning than in the afternoon. This morning morality effect was driven by decreased moral awareness and self-control in the afternoon. Differences in unethical behavior were also found as a function of the days of the week. Israeli soldiers could gain earlier dismissal at the end of the week as a function of the self-reported outcome of a die roll. Participants behaved honestly and reported lower outcomes at the beginning of the week when returning from leave then on other days of the work week [19]. This effect could also be attributed to differences in self-control at the beginning of the week compared to the other days of the week.

Deliberation leads to honesty

As suggested above, depletion leads to a decrease in self-control and to a reliance on the intuitive system. Time could also be an important parameter in determining which cognitive processes we engage in. Since investing time is needed to recruit cognitive control, restricting the time available for performing different tasks, limits the available cognitive resources and reduces the ability to exert self-control. Shalvi, Eldar and Bereby-Meyer [20••] asked participants to privately roll a die and report the outcome, with higher reported outcomes associated with higher payment. Since outcomes were kept truly private, participants could lie to inflate their pay. Participants either had to conduct the task under time pressure, or with no time restriction. Compared to participants who had ample time to report, participants who were instructed to report quickly, reported higher outcomes (i.e., behaved more dishonestly). When having ample time and having no way to justify lying, people refrained from lying altogether. The importance of deliberation for reducing the tendency to behave dishonestly was also reported by Gunia, Wang, Huang, Wang and Murnighan [21••] who found that contemplation promotes ethical decisions, while immediate choice promotes unethical decisions (but see also [22,23]).

Additional evidence for the automatic nature of dishonest behavior came from a recent study by Tabatabaeian, Dale and Duran [24] that examines the cognitive processes underlying dishonesty. They asked participants to privately predict the outcome of a virtual coin flip, report their accuracy and receive a bonus credit for accurate predictions. Participants' movements of the computer cursor toward the target answer were recorded. The cursor appeared in the middle of the screen, and participants had to click on a box stating 'correct' or 'incorrect' on opposing sides of the screen. Participants who were classified as dishonest (because they reported much higher success rates than chance level) moved their cursor quickly toward 'correct', with no significant signs of hesitation. Honest participants, on the other hand, demonstrated hesitation with longer trajectories, suggesting they were contemplating lying but overcame this temptation by taking a bit more time to react. A more direct way to enhance the involvement of the deliberative system in determining behavior is the use of a foreign language [25]. A foreign language is supposedly less emotional and automatic than a native language [26,27]. In line with that, Bereby-Meyer *et al.* [28••] found that participants tended to lie more in order to gain more money when performing the task in their native language than in a foreign language.

Another way to increase reflection on the self is by focusing on time compared to money. Gino and Mogilner [29] found a decrease in dishonest behavior for participants that were implicitly primed with the concept of time compared to the concept of money. The relation between time and honesty was mediated by an increase in people's tendency to reflect on 'who they are' following the priming of time. That is, focusing on time increases the role of the deliberative system and, in turn, reduces the tendency to behave dishonestly. The studies reviewed so far suggest that in tempting situations, when lying serves self-interest, the automatic tendency is to lie, whereas self-control and deliberation are needed for moral awareness and honesty. Yet, people can think and reason in order to find justifications for their behavior, which may prevent them from feeling guilt or experience other aversive results of their behavior [30]. Indeed there

is also evidence that people lie to the extent that they can justify it [31,32]. When it was difficult for people to find justifications for lying because of cognitive load, they reduced their level of dishonesty, compared to people who acted under no cognitive load manipulation [33]. Furthermore, thinking may cause people to focus more on the money they are about to gain by their dishonest act. This may explain, for instance, why people are more likely to lie when they adopt a calculative mind set (e.g., after solving mathematical versus other problems) [34,35]. Thus, contemplation at times may lead to an increase in dishonest behavior rather than to a decrease. In fact, at least regarding moral judgment, the relation needs not be linear. Reasoning with low and high levels of cognitive complexity were found to lead to less moral decisions than those made after reasoning at moderate levels of complexity [36].

Further support for the role of self-control in honest behavior comes from neuropsychological work showing that the right dorsolateral prefrontal cortex (DLPFC), a brain area involved in executive control, is associated with overriding selfish impulses in economic decisions [37]. This area, together with two other brain areas associated with self-control (anterior cingulate cortex and the ventro lateral prefrontal cortex), are activated when dishonest individuals attempt to refrain from lying. However, for honest individuals these areas of control were not activated when people behaved honestly. This evidence suggests that honest individuals do not invest self-control for refraining from cheating. Rather they seem to be less tempted by the rewards, compared to dishonest individuals [38]. In contrast, dishonest individuals who are strongly tempted by rewards need to invest self-control to resist temptation [39].

Self-interest is not always the automatic response. Recent studies show that cooperation is the intuitive response in social dilemmas such as the public goods and the prisoner's dilemma games [40]. Similarly, depleted participants rejected more unfair offers in the ultimatum game and were also more willing to reciprocate generous offers in the trust game, compared to non-depleted participants, even if doing so was costly for them [41••]. Nonetheless, the prosocial considerations in these settings were tested in conditions that involve explicit social exchange. Thus, the structure of the social context was different from the social context of the studies on ethical behavior that were reviewed (for a discussion of this point, see [42]). Indeed, when cooperating with group members can be served by lying, lying to boost the group's interest seems the automatic tendency. Participants who received a dose of the bonding hormone, oxytocin, lied more and did so quicker, compared to participants receiving placebo [43••]. It seems that collaborating with others liberates people to violate ethical rules and lie [44].

Conclusions

The literature reviewed above supports the automatic nature of dishonesty, at least in the face of temptation. We suggest that in situations in which lying is self-serving, namely when there is a motivation to lie, and when the lie is simple to craft, anonymity is preserved and there is almost no risk of being caught, the automatic tendency is toward self-serving behaviors, including telling lies. Only with deliberation, people become aware of the social norms expected from them, and when they have no way to justify lying, people are honest.

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