The (honest) truth about *rational* dishonesty

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ABSTRACT

In his recent bestselling book, *The (Honest) Truth about Dishonesty* (2012), Dan Ariely reports the results of an experiment which revealed that given the opportunity to cheat with seemingly no risk of getting caught and punished, many people would cheat, albeit by just a little bit. Furthermore, the modest level of cheating appeared to be insensitive to the gain from cheating, which leads Ariely to conclude that contrary to Becker's (1968) simple model of rational crime, real life cheaters would not cheat more in response to an increase in the gain from cheating. The present paper shows, first, that Ariely's claim with regard to Becker's model is incorrect, as this model cannot predict at all how the level of rational crime responds to an increase in the gain from crime. Second, the paper offers an extended version of Becker's model which allows for such prediction, showing that an increase in the gain from crime can rationally *decrease* the number of crimes committed. Third, the paper suggests a simple model of rational cheating adjusted to Ariely's experiment setup which rationalizes his results. Finally, the paper reports the results of an experiment which offered participants an opportunity to cheat in a perfectly safe environment, revealing, contrary to Ariely's findings, that when really feeling safe, many people would cheat by a large extent.

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1. Introduction

Economists' interest in dishonesty began with the publication of Becker's (1968) classic paper on rational crime. It was followed by a large number of theoretical contributions which extended the original model in a number of directions as well as applied it to specific criminal offenses such as tax evasion (e.g., Allingham & Sandmo, 1972; Reinganum & Wilde, 1985; Yaniv, 1999), welfare fraud (e.g., Burgees, 1992; Wolf & Greenberg, 1986; Yaniv, 1997) and bribery (e.g., Polinsky & Shavell, 2001; Rose-Ackerman, 1975; Shleifer & Vishny, 1993). Over the past decade, with the growing appeal of experimental techniques, behavioral economists have been designing numerous lab and field experiments with the purpose of deriving insights on real people's honesty behavior, incentivizing subjects with monetary payoffs. While there is a wide variety of honesty experiments reported in the literature, the most prominent genre involves a simple task performed by participants in privacy, such as flipping a coin (e.g., Bucciol & Piovesan, 2011; Houser, Vetter, & Winter, 2012), rolling a dice (e.g., Arbel, Bar-El, Siniver, & Tobol, 2014; Fischbacher & Foellmi-Heusi, 2013) or finding pairs of numbers that add up to 10 in as many

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matrices as possible (e.g., Grolleau, Kocher, & Sutan, 2014; Mazar, Amir, & Ariely, 2008), the outcome of which they are requested to honestly self-report. Other genres of honesty experiments include sender-receiver games where senders may convey deceptive messages to receivers under conditions of asymmetric information (e.g., Gneezy, 2005; Sutter, 2009), dropping wallets or cash envelopes in public places to examine the return rates (West, 2005) and handing cash-paying customers, such as restaurant diners, excessive change to elucidate their tendency to return the undeserved amount (Azar, Yosef, & Bar-Eli, 2013).

Insights derived from honesty experiments appeal not just to researchers, but to the general public as well. It is not surprising that some leading behavioral economists have found it worth their while to report their findings not just in dry academic journals but also in popular-written books that became a commercial success. In a recent book that hit the jackpot, *The (Honest) Truth about Dishonesty*, Dan Ariely (2012) reports the results of an experiment conducted with his colleagues (Mazar et al., 2008) which he claims to reveal that given the opportunity to cheat with no risk of getting caught and punished, many people would cheat, albeit by just a little bit. Furthermore, the modest level of cheating appeared to be insensitive to the gain from cheating, which leads Ariely to conclude that real life cheaters do not behave in the way predicted by Gary Becker's (1968) simple model of rational crime (SMORC, as denoted by Ariely) because

> "*The SMORC tells us that people should cheat more when they stand a chance of getting more money without being caught or punished*" (p. 30)

To test whether real-life cheating behavior conforms to the SMORC alleged premise, Ariely and colleagues set up an experiment where each participant received a sheet of paper containing a series of 20 different matrices. Participants were told that their task was to find in each of these matrices two numbers that added up to 10. They were given 5 min to solve as many of the 20 matrices as possible. For each matrix solved correctly, a monetary reward was promised, the magnitude of which varied among participants (from 25 cents up to 10 dollars). After the 5 min were up, participants were told to count the number of their correct answers, put their worksheet through a shredder located at the back of the room, come to the front of the room and tell the experimenter how many matrices they solved correctly.

Compared to a control treatment where cheating was not possible (since rather than shredding their worksheet participants had to show their solution to the experimenter), it turned out that participants in the shredding treatment added, on average, just two matrices to their scores (reporting 6 solved matrices as compared to 4), regardless of the amount of money they could make per reported solved matrix. The revealed insensitivity of cheating to the amount of reward offered leads Ariely to conclude that

> "*Dishonesty is most likely not an outcome of a cost-benefit analysis. If it were, the increase in the benefit (the amount of money offered) would lead to more cheating*" (p. 31)

In a related experiment, rather than taking the matrix test themselves, another group of participants were asked to guess how many matrices those in the shredding treatment would claim to solve correctly at each level of payment. Their predictions were that the claims of correctly solved matrices would increase as the amount of money went up. Ariely explains this prediction by arguing that

> "*Essentially, their intuitive theory was the same as the premise of the SMORC*" (p. 31)

The purpose of the present paper is four fold. First, show, contrary to Ariely's claim, that Becker's simple model of rational crime (i.e., the SMORC) *does not* tell us that crime increases with the gain from crime. In fact, the SMORC is totally irrelevant to Ariely's experiment as it addresses the incentives to commit just a *single* crime rather than determines the number of crimes to be committed. As such, it has nothing to say on how rational criminals will respond to an increase in the gain from crime. Second, examining an extended version of the SMORC (the ESMORC) which allows for the choice of more than one crime, the present paper shows that an increase in the gain from crime can rationally *decrease* the number of crimes committed. Applied, however, to Ariely's case where there is no risk of getting caught and punished, the ESMORC predicts that offenders will commit as many crimes (or cheating acts) as they possibly can, *regardless of the gain from crime*. This means that participants in Ariely's experiment, if they were rational, should have reported 20 solved matrices irrespective of whether the gain from a solved matrix was 1 cent or 1 million dollars. Thus, rational cost-benefit analysis does not imply, as Ariely claims, that raising the amount of money paid for a solved matrix would increase cheating, but rather that it would leave the level of cheating intact. While the latter implication of the ESMORC conforms with the insensitivity to increased rewards exhibited by Ariely's participants, there remains the question of why they opted to report much less than the rationally-optimal amount of 20 solved matrices. A third purpose of the present paper is to suggest a shame-adjusted simple model of rational cheating (the SHASMORC) which rationalizes this behavior as well. Finally, the paper reports the results of an experiment which offered participants an opportunity to cheat on the number of solved matrices in a perfectly safe environment, revealing, contrary to Ariely's findings, that when really feeling safe, many people would cheat by a large extent.

2. The simple model of rational crime (SMORC)

In his classic paper on the economics of crime, Becker (1968) defines the expected utility (*EU*) to a rational criminal from committing a certain crime in a given period of time as