



Greedy bastards: Testing the relationship between wanting more and unethical behavior[☆]

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ABSTRACT

Greedy is often seen as immoral. Although the assumption that greed elicits unethical behavior is widespread, there is surprisingly little empirical research testing this relationship. We present a series of three studies investigating the association between greed and unethical behavior, using different methodologies and samples from the USA, The Netherlands, and Belgium. Study 1 (3 samples, total $N = 3413$) reveals that more greedy individuals find a variety of transgressions more acceptable and justifiable as well as indicate that they have more often engaged in a variety of transgressions compared to less greedy individuals. Study 2 ($N = 172$) replicated these findings in an incentivized behavioral laboratory study where participants decided to accept a bribe or not. Greedy people were more likely to take a bribe and also preferred higher bribes. Study 3 ($N = 302$) examined a potential process relating greed to unethical behavior. Greedy people were more likely to transgress because they found the positive outcomes associated with the transgression more desirable, and therefore displayed lower self-control. Implications for general theories of greed and morality are discussed.

“For the love of money is the root of all evil.”

–Timothy 6:10

“Fraud is the daughter of greed.”

–Jonathan Gash

1. Introduction

As the quotes above illustrate, greed is often seen as something bad and unethical. Being greedy means taking more than needed, harming others especially in situations of scarcity. That may be the reason why philosophers like David Hume and Immanuel Kant considered greed as immoral and inappropriate (Wang & Murnighan, 2011). All major religious traditions approach greed as something evil. In Christianity greed is one of the seven deadly sins (Tickle, 2004), in Buddhism it is one of the three poisons that create bad karma (Nath, 1998), and in Hinduism it stands in the way of spiritual development (Sundararajan, 1989). Judaism condemns greed because it stands in the way of other people's opportunity to get what they deserve (Bloch, 1984). In Islam precautions against greed are taken in the form of mandatory

generosity and charity for Muslims (Oka & Kuijt, 2014). Greedy is thus often seen as something negative.

Not only philosophers and religions relate greed to immorality and unethical behavior. Greedy has been widely discussed as one of the causes of financial scandals and the late 2000s financial crisis. As Gilliland and Anderson (2014, p. 99) put it: “greedy has become synonymous with Wall Street, big banks, and indeed much of what is wrong with corporate America.” For example, Jordan Belfort (2014), whose actions inspired the movie ‘The Wolf of Wall Street’, later said that it was greed that drove him to commit fraud and swindle millions of dollars through his firm Stratton Oakmont. Similarly, greed has been argued to be one of the causes of other scandals, such as the fraud at Enron and the Bernie Madoff pyramid scheme (Sarna, 2010). Greedy has been argued to be a factor related to corrupt mortgage lending (Morgenson & Rosner, 2011) and employee theft (Caudil, 1988). Haynes, Campbell, and Hitt (2017) reported data showing that CEO greed has a negative relationship with shareholder return.

Despite these observations, it could be doubted whether greedy is inherently unethical. In economics, people are often assumed to be rational, self-interested utility maximizers (known as the axiom of

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greed; Lea, Tarpy, & Webley, 1987). Indeed, Krekels and Pandelaere (2015) found that greed is related to productivity orientation; the continuous striving to use time productively, to make progress, and to reach accomplishments. This corresponds with greed being seen as a central motive spurring economic growth and development (Greenfeld, 2001).

There are also instances of greed where notions of ethics do not apply, for instance when others are not negatively affected by greedy behavior. When someone is greedy for new clothes or shoes this is not necessarily unethical and is arguably good for the economy. There may also be instances in which greed can be good for others, for example when greedy behavior is associated with generating surpluses that can be used by others (Oka & Kuijt, 2014). As a case in point, a greedy person who keeps striving to make more money also pays more taxes, which can be allocated to create or maintain public services.

A prototype analysis of greed and its usage in colloquial language confirmed the idea that greed is not necessarily immoral (Seuntjens, Zeelenberg, Breugelmans, & Van de Ven, 2015a). This analysis found that greed was best defined as an insatiable desire to have more of something desirable. Greedy people are seen as continuously striving for more and never being satisfied with their current state of affairs. Greed was found to apply to material goods, and also for non-material desires such as power, status, or sex. The prototype analysis found that immoral behavior and behavior at the expense of others were sometimes mentioned as characteristics of greed, but not as frequent to be considered a central feature of greed.

Thus, even though greed and unethicality are often linked, the relation is not straightforward. Furthermore, in spite of observations and arguments to this effect, empirical studies relating greed to unethical behaviors are hard to find. We think it is important to empirically study this relationship, so in this paper we examine if greed predicts immorality and unethical behavior and why this might be the case.

1.1. Dispositional greed

We test the effect of greed on unethical behavior by using the natural variation that exists between people in how greedy they are. Recently, several reliable and valid instruments have been developed to assess an individual's dispositional greed (Seuntjens, Zeelenberg, Breugelmans, & Van de Ven, 2015b; see also Krekels & Pandelaere, 2015; Mussel, Reiter, Osinsky, & Hewig, 2015; Veselka, Giammarco, & Vernon, 2014).¹ Dispositional greed has been found to be a stable personality trait that correlates positively with maximization tendencies, envy, materialism, and having a proself orientation. It correlates negatively with self-control, perspective taking, and empathic concern. Moreover, and relevant for the current discussion on whether greed is related to unethical behavior, is that greed is positively associated with a variety of pathological personality traits: antagonism, disinhibition, detachment, negative affectivity, and psychoticism (Vrabel, Zeigler-Hill, McCabe, & Baker, in press).

These individual differences in greed seem to develop during childhood. Krekels (2015) found that greed was negatively associated with childhood SES, but not with current SES. Similarly, Chen (2018) found that individuals growing up in more unpredictable environments were more likely to be greedy as adults. Thus, greed seems to develop as a way to deal with harsh childhood circumstances and to get one's fair share. This might explain why greed is predictive of behavior in

economic dilemmas (Seuntjens, Zeelenberg, Breugelmans, & Van de Ven, 2015b). Greedy individuals make lower offers in dictator games and ultimatum games and harvest more in resource dilemma. Note that from an economic perspective, self-interested behavior in such dilemma games is not unethical, because individuals are assumed to strive for optimal outcomes. In the current research, we measure individual differences in greed and relate these to a variety of unethical behaviors.

1.2. Greed and unethical behavior

Only a few articles address the effects of greed on unethical behavior. Unfortunately, because of measurement problems and definitional issues these studies could not appropriately examine the relation between greed and unethical behavior. Let us explain for each of these studies why we think this is the case.

Some studies on social decision making argue that greedy people display more unethical behavior. For example, Steinel and De Dreu (2004) argued that greedy people were more likely to withhold information from others in a negotiation setting. Cohen, Gunia, Kim-Jun, and Murnighan (2009) argued that groups were greedier than individuals and as a result were more likely to lie. Studies in these papers were typically set up to test multiple motivations such as fear and greed, with greed then being typically assessed with a single item asking participants if they were motivated by “enhancing one's outcomes”. This item may tap into one element of greed, but problematic is that it is also likely to also tap into other motives such as need or self-interest. The item does not pick up the excessive and insatiable elements that characterize greed (Seuntjens, Zeelenberg, & Breugelmans, 2015a) and therefore they cannot be taken as valid operationalizations of the unique motive of greed.

In other studies, greed was not measured but inferred from people's behavioral decisions (Poppe & Utens, 1986; Rapoport & Eshed-Levy, 1989). For example, Gneezy, Saccardo, and Van Veldhuizen (2015) argued that greed is a reason for people to accept bribes. Because greed was not measured in their study this claim cannot be verified. Motives and behaviors need to be independently assessed if any statement about their relationships (causal or correlational) can be tested. We provide such a test of whether greed influences the acceptance of bribes in Study 2.

A few other studies found that inducing people with a calculative mindset leads to greed and unethical behavior. Wang, Malhotra, and Murnighan (2011) found that enhancing economic principles such as maximizing utility induces greed. In other work Wang, Zhong, and Murnighan (2014) investigated how a calculating mindset influences ethical decisions. Participants were repeatedly exposed to calculations, and as a result were more likely to adopt a mathematical approach to solve problems (ignoring negative consequences for others). Participants also displayed more selfish and dishonest behavior to gain higher payoffs. Related to this, Kouchaki, Smith-Crowe, Brief, and Sousa (2013) found that the mere exposure to money resulted in adopting a business decision frame and more unethical behavior. These studies point in the direction of greed being associated with unethical behavior; however, this relationship was not tested directly. Perhaps manipulations of a mathematical mindset or money primes also have other effects that could have led to unethical behavior.

Lastly, the research that is most widely cited as showing that greed leads to unethical behavior is work by Piff, Stancato, Côté, Mendoza-Denton, and Keltner (2012). They found that those in higher social classes acted more unethically, and found that this relationship was mediated by “attitudes towards greed.” People from a higher social class had more favorable attitudes towards greed and were more likely to engage in unethical behavior. Unfortunately, independent replications of this work have failed to find this effect (Trautmann, Van de Kuilen, & Zeckhauser, 2013). More important for our argument is that attitudes towards greed (whether someone sees greed as something good or bad) are different from experiences of greed (being greedy).

¹ In the present studies we measure greed with the Dispositional Greed Scale (DGS; Seuntjens, Zeelenberg, Breugelmans, & Van de Ven, 2015b), because at the time of data collection (2010, 2012, 2014 and the final study in 2015) the other measures were not yet published. Recent research shows that all scales are highly correlated and measure the same construct (Mussel et al., 2018). Meanwhile, the DGS has been translated to Japanese (Masui, Shimotsukasa, Sawada, & Oshio, 2018) and Chinese (Liu et al., 2019).

Thus, earlier findings do hint at a possible relationship between greed and unethical behavior but cannot provide direct evidence to this effect. In a number of studies, we examined whether individual differences in greed can predict unethical behavior and *why* this may be the case. Before turning to the studies, let us first explain how we conceptualize the relation between greed, self-control, and unethical behavior.

1.3. Greed, self-control, and unethical behavior

There is a vast body of research on the relationship between unethical behavior and self-control (Baumeister & Alghamdi, 2015). To engage in self-control (also known as self-regulation), willpower should be stronger than desire (Hoch & Loewenstein, 1991). For such self-regulation in the domain of unethical behavior, both willpower and desire are therefore likely to affect unethical behavior. Greedy people have stronger desires, which creates a tougher battle for willpower to win and making giving in to temptation becomes more likely. For example, Seuntjens, Zeelenberg, Breugelmans, and Van de Ven (2015b) found that dispositional greed is negatively related to self-control and positively to impulsivity and Krekels and Pandelaere (2015) found that greed is positively related to egoism. We expected that the pre-occupation with fulfilling their own desires makes greedy people more likely to behave unethically.

Note that the existing literature on self-regulation and unethical behavior has typically focused on low willpower instead of high desire as the reason for self-regulatory problems.

For example, Gino, Schweitzer, Mead, and Ariely (2011) found that when participants' willpower was depleted, they were more likely to cheat on a test and falsely report better performance levels. In similar vein, Barnes, Schaubroeck, Huth, and Ghumman (2011) found that sleep deprivation led to lower willpower, in turn leading to more cheating and unethical behavior at work. We suggest that a focus on the other element in the equation, namely stronger desire in the form of greed, is equally important to understand unethical behavior. We believe that greed leads to lower self-control, not because it limits willpower, but because it amplifies desires.

There is some research suggesting that increasing desire may lead to more unethical behavior. Gino and Pierce (2009) investigated the influence of wealth on unethical behavior, finding that people were more likely to cheat when they were confronted with abundant wealth compared to scarcity. Maybe the exposure to large amounts of cash increased desire (perhaps via greed), which made it harder to exert self-control and consequently led to more cheating.

In the present paper, we empirically examine the often-assumed relationship between greed and unethical behavior. We use various methodologies and different samples to test the same prediction that greed is related to immorality and unethical behavior. Moreover, in two of the three studies we test if this relation is mediated by self-control. In Study 1 we used survey data (three samples, total $N = 3413$ U.S., Belgian, and Dutch adults) to investigate the association between dispositional greed and a variety of self-reported transgression or attitudes towards these and investigated if this relationship was mediated by self-control. In Study 2 ($N = 172$ Dutch students) we tested if dispositional greed predicted the acceptance of bribes in an incentivized corruption game. In Study 3 ($N = 302$ U.S. adults) we investigated if greedy people behave more unethically because their heightened desire makes it harder to keep self-control.

2. Study 1: surveys on dispositional greed and unethical behavior

We collected data on the relationship between dispositional greed and unethical behavior in three, separate samples. In Sample 1 we asked people how often they engaged in different types of unethical behavior. In Samples 2 and 3 we asked people to rate how acceptable or justifiable different types of unethical behavior were. See Table 1 for an

overview of descriptive statistics of the Dispositional Greed Scale (DGS; Seuntjens, Zeelenberg, Breugelmans, & Van de Ven, 2015b), our key measure.

2.1. Method

2.1.1. Sample 1

This sample consisted of 304 MTurk-workers ($M_{age} = 31.10$, $SD = 9.96$; 58.6% male) with location restrictions set at the U.S.A. Participants received \$0.30 in return for their participation (data collected in March 2014). Participants filled in the DGS and indicated how often they engaged in 10 different types of transgressions (see Table 2).

2.1.2. Sample 2

These data were collected by Multiscope, a market research agency (data collected in March 2014). Participants were members of their online panel. Sample 2a consisted of 1000 Belgian participants (Age: 28.6% between 18 and 34, 41.2% between 35 and 54, 30.2% 55 or older; 50.7% female); Sample 2b consisted of 1018 Dutch participants (Age: 9.7% between 18 and 24, 15.8% between 25 and 34, 19.8% between 35 and 44, 19.6% was between 45 and 54 and 35% 55 or older; 51.5% female). Participants filled out a shortened, 3-item version of the DGS (Seuntjens, Van de Ven, Zeelenberg, & Van der Schors, 2016) and rated the acceptability of the three transgressions displayed in Table 3.

2.1.3. Sample 3

This sample was provided by the LISS (Longitudinal Internet Studies for the Social sciences; www.lissdata.nl), a representative sample of the Dutch population. Four times a year, subsets of the approximately 8000 participants in the panel complete studies and experiments. In the current study, we used two subsamples who filled out questions about the acceptability of unethical behavior. Part of these samples also filled out a self-control scale (Tangney, Baumeister, & Boone, 2004; data collected in February 2012), allowing for a test whether the relationship between dispositional greed and unethical behavior was mediated by self-control. In Sample 3a ($N = 269$; $M_{age} = 53.27$, $SD = 15.12$; 51.3% female) we related people's responses on the DGS (data collected in September 2013) to answers on seven items of the European Values Study (data collected in April 2008) asking participants how justifiable it is to engage in certain types of behavior. These seven items (see Table 4) were previously used by Trautmann et al. (2013) to measure unethical behavior. In Sample 3b ($N = 822$ participants; $M_{age} = 53.25$, $SD = 15.90$; 51.6% female) we related responses to the DGS to the acceptability of 12 other types of transgressions (see Table 5; data collected in June 2010).

2.2. Results and discussion

For all samples we analyzed whether dispositional greed was related to engaging in unethical behaviors, to the acceptability of unethical behaviors, or the justifiability of unethical behaviors. We did so in several ways, to test the robustness of results. First, we simply computed correlations between the score on the DGS and these measures. In addition, we ran a multivariate analysis in which we predicted unethical behavior (all that were assessed in the sample) by the independent variables dispositional greed, age, and gender. We report this overall multivariate effect in the result sections, and report the regression analyses for each individual behavior in the tables. Finally, in each sample we create a composite score of unethical behavior, averaging across all transgressions (at the bottom of each table), and use that in both the correlational analysis and the regression analysis as well.

Sample 1 provided clear support for the idea that dispositional greed was associated with self-reported engagement in 10 unethical behaviors. Overall, the multivariate analysis found that dispositional greed was significantly related to the engagement in unethical

Table 1
Mean scores and standard deviation of the items of the Dispositional Greed Scale for all samples in Study 1.

Items	Sample 1		Sample 2a		Sample 2b		Sample 3a		Sample 3b	
	N = 304		N = 1000		N = 1018		N = 269		N = 822	
	U.S. based M-Turk		Belgian adults		Dutch adults		LISS-panel (Dutch adults)		LISS-panel (Dutch adults)	
	M	SD	M	SD	M	SD	M	SD	M	SD
1. I always want more.	2.89	1.11	2.14	1.04	2.27	1.09	2.12	1.02	2.20	0.98
2. Actually, I'm kind of greedy.	2.55	1.16	2.25	1.07	2.20	1.08	1.93	0.94	1.99	0.94
3. One can never have too much money.	3.34	1.25	–	–	–	–	2.69	1.13	2.79	1.10
4. As soon as I have acquired something, I start to think about the next thing I want.	2.73	1.13	2.01	1.05	1.94	1.05	1.74	0.85	1.82	0.87
5. It doesn't matter how much I have. I'm never completely satisfied.	2.53	1.09	–	–	–	–	1.52	0.74	1.58	0.76
6. My life motto is 'more is better'.	2.48	1.10	–	–	–	–	1.70	0.88	1.70	0.83
7. I can't imagine having too many things.	2.59	1.17	–	–	–	–	1.57	0.76	1.58	0.75
Mean dispositional greed	2.73	0.85	2.13	0.93	2.14	0.98	1.89	0.72	1.95	0.70
Cronbach's α	0.86		0.86		0.89		0.90		0.87	

Note: In Samples 2a and 2b greed was assessed with the short 3-item version of the DGS. Participants were asked to indicate whether the items were descriptive of them. Responses are measured on a 5-point Likert scale ranging from 1, *completely disagree*, to 5, *completely agree*.

Table 2
Descriptive statistics for the unethical behaviors in Sample 1 (N = 304 American Adults) from Study 1, their correlation with dispositional greed, and regressions of unethical behaviors on dispositional greed, age and gender.

Unethical behavior	M	SD	r	β_{DGS}	β_{age}	β_{gender}	F(3, 300)	p	R ²
Evading fare on public transit	1.40	0.77	0.08	0.03	-0.16**	0.13*	5.18	.002	0.05
Not mentioning that cashier gave too much change	2.10	1.15	0.20**	0.19**	-0.02	0.10 [†]	5.57	.001	0.05
Cribbing on an exam	1.51	0.82	0.25**	0.22**	-0.08	0.14*	9.62	< .001	0.09
Cheating on partner	1.46	0.82	0.15*	0.16*	0.08	0.01	2.85	.038	0.03
Illegally downloading movies	2.70	1.36	0.16*	0.09	-0.30**	0.20**	19.67	< .001	0.16
Call in sick when not feeling like working	2.24	0.90	0.10 [†]	0.11 [†]	0.01	-0.07	1.44	.233	0.01
Bullying kids in school	1.78	0.87	0.13**	0.13*	-0.00	0.04	1.94	.123	0.02
Spreading gossip	2.32	0.82	0.17**	0.19**	0.04	-0.10 [†]	4.39	.005	0.04
Running a red light by car	1.91	0.76	0.12*	0.13*	0.08	0.07	2.46	.063	0.02
Discriminating others (for example on gender, race, or sexuality)	1.81	0.86	0.23**	0.23**	0.04	0.04	6.03	.001	0.06
Average unethical behavior ($\alpha = 0.73$)	1.92	0.50	0.29**	0.27**	-0.08	0.12*	12.14	< .001	0.11

Participants indicated how often they engaged in each unethical behavior on a scale running from 1 = *never* to 5 = *very often*.

[†] p < .10.
* p < .05.
** p < .001.

Table 3
Descriptive statistics for the unethical behaviors in Sample 2a (N = 1000 Belgian adults) and Sample 2b (N = 1018 Dutch adults) from Study 1, their correlation with dispositional greed, and regressions of unethical behaviors on dispositional greed, age and gender.

Unethical behavior	M	SD	r	β_{DGS}	β_{age}	β_{gender}	F(3, 996)	p	R ²
Sample 2a (N = 1000 Belgian adults)									
Not returning a wallet	2.28	1.28	0.25**	0.24**	-0.05	0.01	23.41	< .001	0.07
Not mentioning extra income on tax return	2.81	1.34	0.12**	0.13**	0.06 [†]	0.18**	17.58	< .001	0.05
Buying alcohol for a 16-year old in return for €10.	1.34	0.88	0.27**	0.22**	-0.14**	0.05 [†]	32.34	< .001	0.09
Average unethical behavior ($\alpha = 0.38$)	2.19	0.79	0.30**	0.28**	-0.04	0.12**	40.67	< .001	0.11
Sample 2b (N = 1018 Dutch adults)									
Not returning a wallet	1.95	1.18	0.19**	0.18**	-0.03	0.04	12.895	< .001	0.04
Not mentioning extra income on tax return	2.97	2.97	0.08*	0.09*	0.09*	0.06 [†]	5.840	.001	0.02
Buying marihuana for a foreigner in return for €10.	2.38	2.38	0.16**	0.10*	-0.16**	0.15**	23.723	< .001	0.07
Average unethical behavior ($\alpha = 0.50$)	2.43	0.96	0.20**	0.17**	-0.05 [†]	0.12**	19.318	< .001	0.05

Participants rated transgressions on a scale running from 1 = *completely unacceptable* to 5 = *completely acceptable*.

[†] p < .10.
* p < .05.
** p < .001.

Table 4

Descriptive statistics for the unethical behaviors in Sample 3a ($N = 269$ Dutch adults from the representative LISS panel) from Study 1, their correlation with dispositional greed, and regressions of unethical behaviors on dispositional greed, age and gender.

Unethical behavior	<i>M</i>	<i>SD</i>	<i>r</i>	β_{DGS}	β_{age}	β_{gender}	<i>F</i> (3, 264)	<i>p</i>	<i>R</i> ²
Claiming state benefits which you are not entitled to	1.47	1.28	0.06	0.05	−0.00	0.09	1.74	.367	0.01
Cheating on tax if you had the chance	2.25	1.78	0.14*	0.12†	−0.01	0.15*	3.75	.012	0.04
Taking and driving away a car belonging to someone else (joyriding)	1.34	0.97	0.22**	0.13*	−0.201*	0.07	8.31	< .001	0.09
Lying in your own interest	3.20	1.78	0.28**	0.13*	−0.33**	0.20**	22.50	< .001	0.20
Married men/women having an affair	2.48	1.84	0.13*	0.05	−0.11†	0.32**	12.46	< .001	0.12
Someone accepting a bribe in the course of their duties	1.75	1.46	0.30**	0.14*	−0.35**	0.13*	22.05	.001	0.20
Avoiding a fare in public transport	2.54	2.07	0.31**	0.20**	−0.24**	0.13*	16.32	< .001	0.16
Average unethical behavior ($\alpha = 0.67$)	2.18	1.00	0.37**	0.21**	−0.31**	0.29**	34.39	< .001	0.28

Participants rated how justifiable it is to engage in each behavior on a scale running from 1 = *never justifiable* to 5 = *always justifiable*.

† $p < .10$.
 * $p < .05$.
 ** $p < .001$.

behaviors, Wilks' Lambda = 0.889, $F(10, 291) = 3.64$, $p < .001$, as was age, Wilks' Lambda = 0.859, $F(10, 291) = 4.76$, $p < .001$, and gender, Wilks' Lambda = 0.891, $F(10, 291) = 3.54$, $p < .001$. For most individual regression analyses we also found that greed was predictive of the engagement in unethical behavior, also when controlling for age and gender. All results can be found in Table 2.

The results for the three behaviors that were rated for acceptability by Samples 2a and 2b are reported in Table 3. The multivariate analysis found that dispositional greed was significantly related to the acceptability of unethical behaviors in Belgium, Wilks' Lambda = 0.913, $F(3, 994) = 31.48$, $p < .001$, as was age, Wilks' Lambda = 0.975, $F(3, 994) = 8.57$, $p < .001$, and gender, Wilks' Lambda = 0.967, $F(3, 994) = 11.39$, $p < .001$; and in the Netherlands, Wilks' Lambda = 0.968, $F(3, 1012) = 11.29$, $p < .001$, as did age, Wilks' Lambda = 0.960, $F(3, 1012) = 14.03$, $p < .001$, and gender, Wilks' Lambda = 0.977, $F(3, 1012) = 7.92$, $p < .001$.

The results of seven unethical behaviors that were rated for justifiability by Sample 3a are reported in Table 4. The multivariate analysis found that dispositional greed was significantly related to the justifiability of unethical behaviors, Wilks' Lambda = 0.938, $F(7, 258) = 2.43$, $p < .05$, as was age, Wilks' Lambda = 0.797, $F(7, 258) = 9.36$, $p < .001$, and gender, Wilks' Lambda = 0.871, $F(7, 258) = 5.44$, $p < .001$.

The results of the 12 unethical behaviors that were rated for acceptability in Sample 3b are reported in Table 5. The multivariate analysis found that dispositional greed was significantly related to the acceptability of unethical behaviors, Wilks' Lambda = 0.956, $F(12, 807) = 3.09$, $p < .001$, as was age, Wilks' Lambda = 0.864, $F(12,$

$807) = 10.54$, $p < .001$, and gender, Wilks' Lambda = 0.941, $F(12, 807) = 4.24$, $p < .001$.

2.2.1. Meta-analysis

To assess the average correlation between dispositional greed and unethical behavior we conducted a random effects meta-analysis on the correlations between dispositional greed and unethical behavior (if multiple unethical behaviors were asked for, we combined them into one composite measure) for all five samples (see Fig. 1). The mean effect size across all five samples was $r = 0.28$, indicating a moderate correlation between dispositional greed and unethical behavior. The test for heterogeneity is significant, $Q(df = 4) = 10.30$, $p = .04$, suggesting that there are likely moderators that influence the magnitude of the correlation.

2.2.2. Mediation analyses

Because some of the participants in Samples 3a and 3b had previously filled in the self-control scale, we could examine whether greed leads to more unethical behavior via a lower self-control. We ran two mediation analyses (cf. Preacher & Hayes, 2008) with bias corrected intervals and 10,000 iterations. Fig. 2 contains the standardized regression coefficients of Samples 3a and 3b. For both samples, the 95% confidence interval (CI) for the indirect effect of self-control did not include zero ($CI_{3a} [0.01, 0.17]$; $CI_{3b} [0.05, 0.11]$), indicating that self-control statistically mediated the relationship between dispositional greed and unethical behavior. We find these results especially telling because the different constructs (greed, self-control, and the transgressions) were assessed at different points in time.

Table 5

Descriptive statistics for the unethical behaviors in Sample 3b ($N = 822$ Dutch adults from the representative LISS panel) from Study 1, their correlation with dispositional greed, and regressions of unethical behaviors on dispositional greed, age and gender.

Unethical behavior	<i>M</i>	<i>SD</i>	<i>r</i>	β_{DGS}	β_{age}	β_{gender}	<i>F</i> (3, 818)	<i>p</i>	<i>R</i> ²
Lying that you precisely observed a diet to lose weight	2.76	0.93	0.17**	0.12**	−0.17**	0.07	16.31	< .001	0.06
Buying imitation brand clothing and pretending it's the real thing	2.70	0.96	0.17**	0.13**	−0.14**	0.03	13.77	< .001	0.05
Dishonestly calling in sick to work for one day	2.00	0.91	0.16**	0.12**	−0.12**	0.01	10.68	< .001	0.04
Using computer software or games without paying for it	2.86	1.04	0.17**	0.07†	−0.27**	0.14**	32.39	< .001	0.11
Downloading or copying films or music from the Internet without paying for it	3.20	1.04	0.18**	0.07*	−0.29**	0.12**	36.29	< .001	0.12
Keeping quiet when a chain store accidentally charges too little for a product	2.73	0.99	0.21**	0.13**	−0.26**	0.04	31.79	< .001	0.11
Not notifying the bank after it accidentally transfers money into your account	2.27	0.96	0.26**	0.18**	−0.23**	0.14**	40.42	< .001	0.13
Pretending to others that the price of a product is more than what you actually paid for it	2.41	0.85	0.19**	0.12**	−0.16**	0.12**	19.75	< .001	0.07
Claiming a guarantee on a product for which the term of the guarantee has actually expired	2.90	0.96	0.15**	0.09*	−0.17**	0.11*	16.68	< .001	0.06
Switching price tags in a supermarket in order to get something more cheaply	1.58	0.66	0.15**	0.12**	−0.11*	−0.02	9.62	< .001	0.03
Dishonestly reporting something as stolen to a travel insurance	1.60	0.67	0.16**	0.13**	−0.10*	0.03	10.06	< .001	0.04
Taking along a towel or another 'souvenir' from an international hotel or restaurant	2.05	0.86	0.17**	0.08*	−0.27**	0.06†	28.10	< .001	0.09
Average unethical behavior ($\alpha = 0.86$)	2.41	0.58	0.28**	0.14**	−0.31**	0.11**	56.22	< .001	0.17

Participants rated how acceptable the transgressions were on a scale running from 1 = *entirely unacceptable* to 5 = *entirely acceptable*.

† $p < .10$.
 * $p < .05$.
 ** $p < .001$.

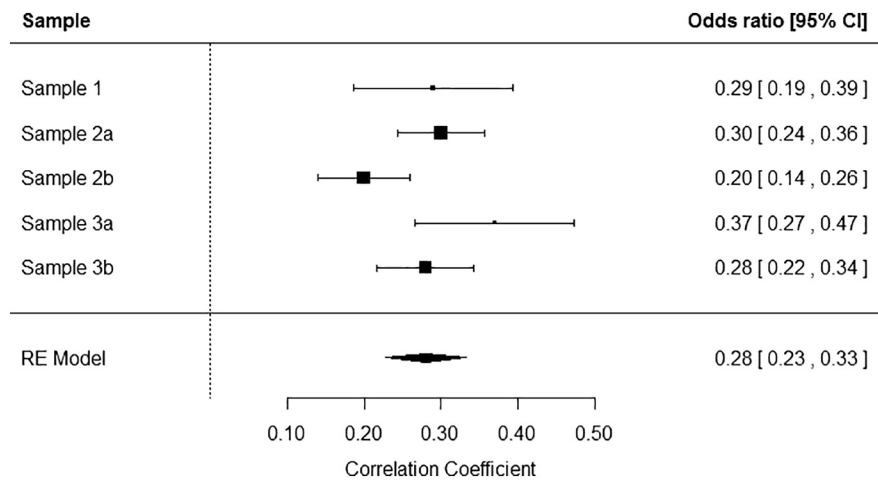


Fig. 1. Forest plot of the mean correlations between dispositional greed and unethical behavior for all samples in Study 1.

To summarize, we found that dispositional greedy individuals find a variety of transgressions more acceptable and justifiable, and indicate that they more frequently transgress. Across studies, this effect is moderate. In addition, Samples 3a and 3b provided evidence for the relationship between greed and unethical behavior being mediated by self-control.

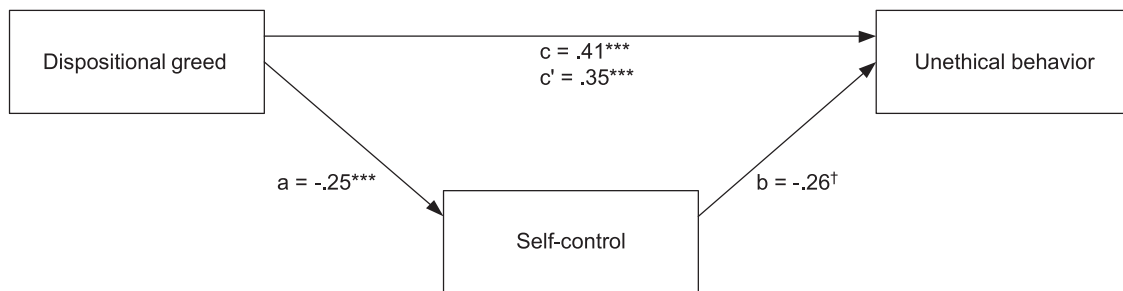
3. Study 2: dispositional greed and corruption in the lab

The next step was to investigate if dispositional greed predicted actual immoral behavior in the lab. In order to test this, we related participants' responses on the DGS to behavioral decisions in a corruption game (Frank & Schulze, 2000).

3.1. Method

Participants were 172 first year students ($M_{age} = 19.68$, $SD = 2.14$; 19.8% male, 80.2% female) who participated in return for course credit (data collected in October 2014). Participants completed the corruption game developed by Frank and Schulze (2000). Participants were asked to imagine a situation in which the local Psychology Study Association had lost 200 Euros (it fell down a drain pipe and could only be retrieved by a plumbing company). The association had asked the participant to choose from the most favorable (from the perspective of the association) offers by various companies. Ten plumbing companies placed an offer that only the participant knew. Each offer consisted of two parts, the price the study association had to pay for the plumber's services, and a bribe the participant would receive if he or she picked that

Study 1 Sample 3a ($N = 269$ Dutch Adults):



Sample 3b ($N = 822$ Dutch Adults):

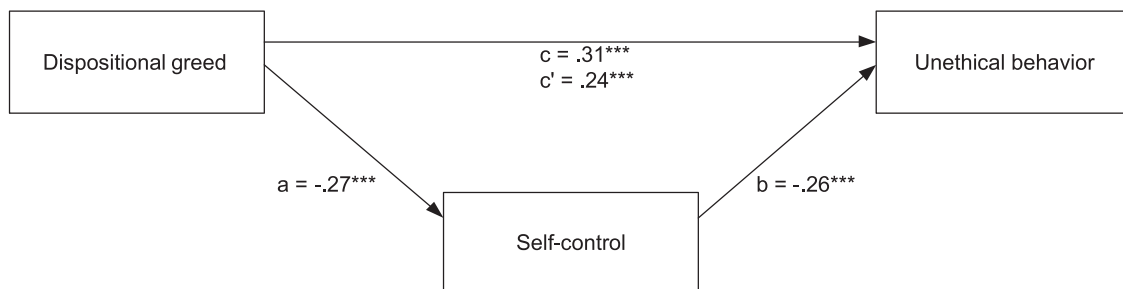


Fig. 2. Mediation between dispositional greed and unethical behavior by self-control in Study 1. Note: we report unstandardized regression coefficients. *** $p < .001$.

particular company. The scheme of offers was constructed in such a way that the more money the participant would receive, the more money the study association had to pay the plumbing company. Participants had to choose one of the ten plumbing companies. In the best case for the study association, the participant would pick the company that charged 20 Euros (leaving 180 Euros for the study association), in that case the participant received no bribe (0 Euro). In the worst case for the study association, the participant would pick the plumber who charged 200 Euro (leaving no money for the study association), in that case the participant would receive a bribe of 144 Euro.

The participants learned that at the end of the week we would randomly select one participant and s/he (and the study association) would get paid on the basis of their choice. For example, if a participant had chosen company A5, the study association would receive 100 Euros (200 Euros recovered from the pipe drain minus the 100 Euros for the service of the plumber company) and the participant would receive a bribe of 64 Euros. After participants had made their decision they were asked to fill out the DGS ($\alpha = 0.81$, $M = 2.47$, $SD = 0.69$). Of the 172 participants, 78.5% of the participants accepted a bribe, and the average bribe was €70.28 ($SD = 36.10$).

3.2. Results and discussion

Because responses to the decision to choose a plumber company were censored (there were 37 [=21.5%] participants who chose the option not accepting any bribe) we conducted a Tobit regression analysis, $\beta_{\text{tobit}} = 0.38$, $t = 3.37$, $p < .001$. As expected, we found that greedy individuals were more likely to choose a company offering a higher bribe. To further explore the relationship between greed and bribes we conducted a binary logistic regression analysis to test whether greed scores predicted whether people accept a bribe and a linear regression analysis to test whether they accepted higher bribes (for those who accepted a bribe in the first place). This analysis revealed that dispositional greed predicted whether people accepted a bribe or not, odds ratio = 2.03, $Wald = 5.80$, $p = .016$. This indicates that an increase of 1 point on the DGS doubles the probability of accepting a bribe. Lastly, we found that the higher people scored on dispositional greed, the higher the bribe was they accepted, $\beta = 0.19$, $t = 2.24$, $p = .03$.

4. Study 3: the effect of greed is mediated by self-control

Thus far, we found support for the idea that greedy people are more lenient when it comes to unethical behaviors; they evaluated these behaviors as more acceptable and they indicate to engage in these behaviors more often (Study 1). We also found that the greedy were more susceptible to bribes (Study 2). The results of Study 1 further suggest that the relationship between greed and unethical behavior runs through lowered self-control. To further test this idea of mediation through self-control, we designed Study 3. In this study, we presented participants with two scenarios in which they could choose to transgress or not. The *Wallet* scenario describes the dilemma of finding a wallet with money and an ID in it (do they keep the money or not?). The *Attractive person* scenario describes the dilemma of being romantically approached by an attractive person while being in a relationship (do they act on the temptation or not?). The transgressions were tempting, and participants would need willpower to resist them. We assessed how greedy people were, whether they would act on the temptation, how desirable they saw the temptations to be, and how much willpower they would need to refrain from transgressing. This allows for testing both elements of self-control as potential mediators.

4.1. Method

Participants were 302 MTurk-workers with location restriction set at the U.S.A. ($M_{\text{age}} = 33.08$, $SD = 10.28$; 54.6% male, 45.4% female)

who participated in return for \$0.30 (data collected in September 2015). Participants read both scenarios and answered the accompanying questions. In the *Wallet* scenario participants read the following:

You are walking down the street when you come across a wallet lying on the ground. You open the wallet and find that it contains \$50 in cash as well as the owner's driver's license. From the credit cards and other items in the wallet it's very clear that the wallet's owner is wealthy. You, on the other hand, have been hit by hard times recently and could really use some extra money.

You consider sending the wallet back to the owner without the cash, keeping the cash for yourself.

We then asked them the following questions: Would you keep the money you found in the wallet in order to have more money to yourself? ($-3 = \text{definitely no}$, $3 = \text{definitely yes}$; $M = -1.19$; $SD = 2.18$); How desirable would it be for you to keep the money yourself? ($-3 = \text{very undesirable}$, $3 = \text{very desirable}$; $M = 0.87$; $SD = 2.21$); and How much willpower would you need to return the wallet? ($-3 = \text{no willpower}$, $3 = \text{a lot of willpower}$; $M = -0.25$; $SD = 2.22$).

In the *Attractive person* scenario participants read the following:

You are away on a trip for work and spend a few days in a hotel in a large city on the other side of the country. You are the only one from your company and do not know anybody in that city. On the third night, you decide to go out and have a drink in one of the local bars. When you notice an attractive person at the bar, s/he also notices you and is clearly interested. You start chatting and before you know it is a few hours and a few drinks later, and you are having the time of your life. It is clear that the two of you feel very much attracted to each other. You are actually aroused and excited. Now, s/he asks you to come to his/her hotel room and spend the night, no strings attached. The both of you are in a relationship and do not want to ruin that. But this night brings an unexpected opportunity to make out with a beautiful person, and no one has to find out anything.

We next asked participants: Would you accept the invitation to spend the night with this attractive person? ($-3 = \text{definitely no}$, $3 = \text{definitely yes}$; $M = -1.18$, $SD = 2.09$); How desirable would it be for you to spend the night with this attractive person? ($-3 = \text{very undesirable}$, $3 = \text{very desirable}$; $M = 0.78$, $SD = 2.16$); and How much willpower would you need to decline the invitation? ($-3 = \text{no willpower}$, $3 = \text{a lot of willpower}$; $M = 0.73$, $SD = 2.15$).

In addition to answering these questions about the two scenarios they also completed the DGS ($\alpha = 0.90$; $M = 2.73$, $SD = 0.96$). The order in which the scenarios were presented and the order between scenarios and the DGS were counterbalanced, which did not affect the results.

4.2. Results and discussion

Using linear regression analyses, we first investigated whether dispositional greed was associated with the transgressions. As expected, dispositional greedy individuals indicated that they were more likely to keep the money to themselves, $\beta = 0.31$, $t = 5.64$, $p < .001$, and that they were more likely to cheat on their partner, $\beta = 0.29$, $t = 5.27$, $p < .001$. This replicated the main finding of the present research that greed is related to immorality and unethicality.

The further aim of Study 3 was to investigate if the relationship between greed and transgressions was mediated by self-control (see Fig. 3). More specifically, we wanted to test if higher levels of desire in greedy individuals would (partially) account for why they transgress. A mediation analysis of dispositional greed on returning the wallet revealed that the relationship between the two was partially mediated by desire (95% CI [0.14, 0.36]) and willpower (95% CI [0.03, 0.17]). If we contrast the two mediators, we find that desire is a stronger mediator

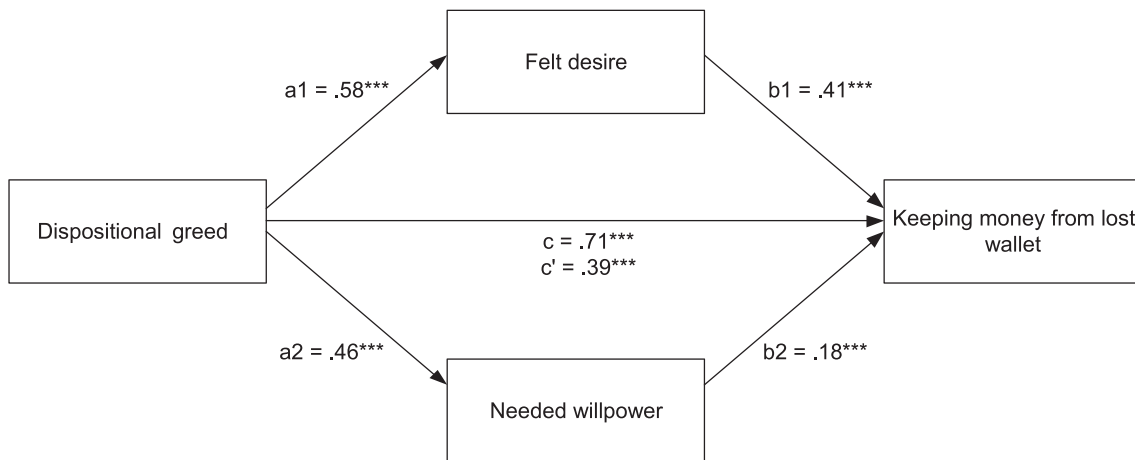
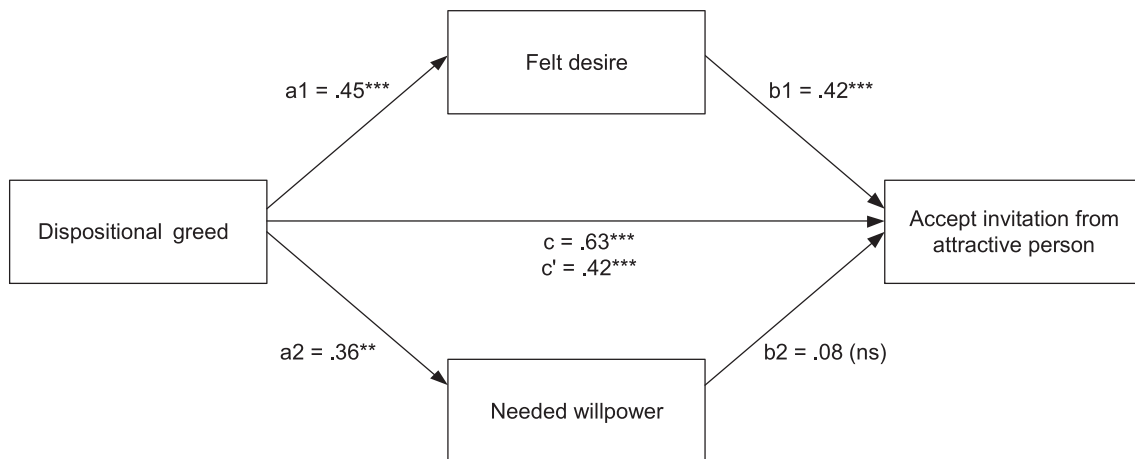
Wallet scenario:*Attractive person scenario:*

Fig. 3. Regression analyses testing whether desire and willpower mediate the effect of dispositional greed on unethical behavior in Study 3 ($N = 302$ American adults).

Note: we report unstandardized regression coefficients. ** $p < .01$; *** $p < .001$.

than willpower (95% CI [0.03, 0.30]). A mediation analysis of dispositional greed on accepting the offer of the attractive person (and thus cheat on their partner) revealed that the relationship between the two was partially mediated by desire (95% CI [0.08, 0.31]), but not by willpower (95% CI [-0.01, 0.09]). As expected, if we contrast the two mediators, we again find that desire is a stronger mediator than willpower (95% CI [0.05, 0.31]). These results suggest that greedy people engage more in unethical behavior especially because greed increases desire.

These findings also help to shed light on a question raised by Mussel and Hewig (2016), who found a relation between their greed measure and a tendency for “meanness”, to strive for things at a cost to others. They wondered whether that result was caused by an acquisition motivation (simply wanting as much as possible for oneself) or an actual desire to hurt others. Our findings suggest that it is the former: It is this increase in desire that makes greedy people more likely to engage in unethical behavior that might be disadvantageous to others.

5. General discussion

The goal of this research was to investigate the often-assumed link

between greed on the one hand, and unethical behavior and immorality on the other. Three studies found that dispositional greed was indeed associated with more unethical behavior. Combining responses of over 3000 participants, Study 1 revealed that greedy individuals found a wide range of transgressions more acceptable and indicated that they had more often engaged in such transgressions. We also found that the correlation between dispositional greed and acceptability ratings of transgressions was statistically mediated by individual differences in self-control.

Study 2 found that dispositional greed predicted people's decisions in an incentivized corruption game. Participants had to pick a plumber company for their study association. There were multiple plumber companies they could choose from, all ranging in the price for their service to the study association, and in the amount of money they offered as a bribe. Greedy participants were more likely to choose a company that offered a bribe, and were more likely to choose a company that offered a larger bribe compared to a lower bribe.

Study 3 further investigated the mediating role of self-control. Participants were asked to imagine situations in which transgressing would have a desirable outcome (not returning a lost wallet; cheating on a partner with an attractive other). For both situations, participants

indicated if they would transgress or not, and how desirable it would be to transgress and how much willpower they would need to refrain from transgressing. Again, we found that the relationship between greed and unethical behavior was mediated by self-control. Greedy individuals experience especially more desire and are therefore more easily lured into unethical behavior.

5.1. Contributions and implications

The idea that greed is immoral is old and widespread (Oka & Kuijt, 2014). However, until recently, greed was mostly neglected in empirical research due to problems defining the construct (Wang & Murnighan, 2011). In recent years, greed has more clearly been defined (Seuntjens, Zeelenberg, Breugelmans, & Van de Ven, 2015a) and research on greed has increased (e.g., Gilliland & Anderson, 2014; Haynes et al., 2017; Krekels & Pandelaere, 2015; Mussel, Rodrigues, Krumm, & Hewig, 2018). As was described in the introduction, several earlier studies suggested that greed leads to unethical behavior, but could not explicitly test this link because greed was confounded with self-interest or was inferred rather than measured. To our knowledge, the present research is the first to empirically show individual differences in greed to reliably predict how acceptable people find transgressions and how often they transgress.

In addition, our research demonstrated the mediating role of self-control in the relationship between greed and unethical behavior. Multiple studies have found that low self-control is associated with more unethical behavior. Studies investigating unethical behavior and self-control failure have typically focused on how ego depletion lowers will-power, which in turn makes people more likely to act unethically (Barnes et al., 2011; Gino et al., 2011). In the current research, we find that self-control failure is not only the result of low willpower. We found that greedy individuals were more tempted by the desirable outcome related to the unethical behavior, and therefore are more likely to act unethically.

In the last decade, a number of companies and organizations were confronted with large fraud cases and other financial scandals. The insight that greed may partially explain this behavior might help companies with the prevention of these types of scandals. Situations that could elicit greed, such as a competitive environment or high bonuses, could lead to people behaving more unethically. Research found that companies with greedy CEOs perform worse, which is partly due to the misuse of the financial resources of the firm (Haynes, Hitt, & Campbell, 2014; Haynes et al., 2017). Interventions that prevent unethical behavior can be helpful at all levels of a company, because greed-fueled unethical behavior can be the result of greedy CEO's that commit fraud, to employees that steal office supplies or dishonestly calling in sick for work.

5.2. Limitations and directions for further research

We predicted that dispositional greed leads to more unethical behavior, reporting three studies showing the predicted relationship. This does not mean that our studies are without limitations. The surveys in Study 1 rely on self-reported behavior and those in Study 3 on hypothetical behavior. This set-up may have invited socially desirable responding. In previous research, we addressed this issue finding social desirability to explain < 6% of variance in the DGS (Seuntjens, Zeelenberg, Breugelmans, & Van de Ven, 2015b). Although this does not preclude social desirability in responding to the questions about unethical behavior, it does make it less likely that the relationship between these behaviors and greed can be explained by social desirability. In addition, Study 2 used an incentivized choice design to overcome this issue. A possible limitation to Study 2 is that the unethical behavior here is more indirectly immoral: The behavior does not cause direct harm, but rather withholds a benefit from a student association. We think that to greedily take money for oneself and thereby withholding it

from a volunteer organization that spends its money for the greater good (organizing events, providing student tutoring, etc.) clearly is immoral, but generalization of this finding to other immoral behaviors may need some caution. Finally, our results suggest that greed affects unethical behavior, especially because it increases desire, which in turn makes unethical behavior more likely. It is important to note, though, that these conclusions are based on cross-sectional data, which clearly limits the strength of causal inferences. However, we also think that theoretically it seems much more plausible that a general dispositional tendency to be greedy should affect the momentary desire and likelihood to engage in immoral behavior as we measure it in Study 3, than the reverse. We feel it is reassuring that, in spite of their limitations, the results of each study point in the same direction: dispositional greed is related to immoral behaviors. At the same time, we would welcome replications of these studies, to further examine the robustness of our findings or identify possible moderators.

In our research, we solely focused on the relationship between individual differences in greed and unethical behavior. However, greed can also be situational. Investigating the relationship between situational greed and unethical behavior would be interesting for two reasons. First, it could give insights into the causality of the relationship between greed and unethical behavior. We assumed that greed would lead to unethical behavior instead of vice versa, however, we could not test if this was indeed the case. Second, it would be interesting to see what types of stimuli induce greed. Gino and Pierce (2009) found that abundant wealth compared to scarcity, led to more immorality. Abundance might be one of the triggers of greed. If so, greed might also be elicited by the money primes that make people more unethical (Kouchaki et al., 2013). It would be interesting to investigate if these effects occur through the effects of money on greed, or whether these are direct effects of money primes.

We hypothesized that because greed is an insatiable desire for more of something, greedy people would be more likely to fail in self-control. Although we do find that the relationship between greed and unethical behavior is mediated by these components of self-control, this does not mean that there are no other underlying mechanisms that could explain this relationship. One of the mechanisms that could play a role is moral disengagement. This is the process in which people disengage their internal moral standards from behavior and explains why normal people can behave unethically without feeling bad (Bandura, 1986). Moral disengagement is influenced by a variety of dispositions including cynicism and empathy (Detert, Treviño, & Sweitzer, 2008), and this may extend to greed as well.

A related alternative explanation is that greedy individuals simply do not think about the consequences of their behavior. Greed is associated with having a tunnel vision and being goal oriented (Seuntjens, Zeelenberg, Breugelmans, & Van de Ven, 2015a). Being focused on one specific goal can make people inattentive to other things which in turn can lead to more unethical behavior (e.g., Schweitzer, Ordóñez, & Douma, 2004). It might be that greedy people are so focused attaining their goal that they just do not consider the consequences of their behavior on others.

Further research could also investigate what other cues could increase desire. Crusius and Mussweiler (2012) found that increasing desire via upward comparison (e.g., a neighbor receiving nice chocolates, cookies, or ice cream) led to more envy and anger. This was especially the case when willpower was already low (because participants were intoxicated with alcohol or under cognitive load). It would be interesting to see if greed could be elicited by upward social comparisons and in this way could lead to more unethical behavior.

6. Conclusions

The idea that greed is unethical is widespread. The current research confirms the idea that greed is associated with unethical behavior. We find that dispositional greedy individuals evaluate a variety of

transgressions more acceptable and are more likely to engage in these transgressions. The relationship between greed and unethical behavior can be partially explained by lower self-control. Greedy individuals find the desirable outcomes associated with unethical behavior more tempting, and as a result are more easily lured into unethical behavior.

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