



When enough is not enough: Overearning as a manifestation of dispositional greed



Marcel Zeelenberg^{a,b,*}, Terri G. Seuntjens^c, Niels van de Ven^d, Seger M. Breugelmans^c

^a Tilburg Institute for Behavioral Economics Research (TIBER), Department of Social Psychology, Tilburg University, the Netherlands

^b Department of Marketing, VU Amsterdam, the Netherlands

^c TIBER & Department of Social Psychology, Tilburg University, the Netherlands

^d TIBER & Department of Marketing, Tilburg University, the Netherlands

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ABSTRACT

Overearning is the tendency to forgo leisure and to earn more than one needs. Despite the important individual and societal consequences of overearning, little is known about who overearns and why. We examined the role of dispositional greed in explaining overearning. Study 1, an incentivized behavioral lab study ($N = 153$), found that greedy individuals showed overearning to a larger degree than less greedy individuals. A follow-up survey ($N = 297$) suggested that greedy people overearn more because they find the pursuit of wealth more important, not because they find the associated labor less aversive. Consistent with these findings, Study 2 ($N = 472$), finds that greedy people value money more than time, a pattern associated with lower well-being. Finally, Study 3, another incentivized behavioral lab study with two measurement moments ($N_{time-1} = 185$; $N_{time-2} = 133$), replicated and extended the findings of Study 1 to a longitudinal context. People do appear to learn from overearning in the past, as overearning was reduced from time 1 to time 2. However, even at time 2, overearning was observed and greedy individuals showed a larger degree of overearning. Implications for what we can do to prevent overearning and increase well-being are discussed.

People need to balance how hard they want to work in order to purchase the things they need and want, with keeping enough leisure time to enjoy such rewards. John Stuart Mill (1836) considered this balance to lie at the basis of economics (what was then called Political Economy) and believed that only a few general principles of human behavior would be needed to understand the choices that people make. The most important of these principles were the *pursuit of wealth* and the *aversion to labor*. The latter is straightforward: people dislike working and rather not engage in it. The former, the pursuit of wealth, can be seen as the corner stone of economic motivation. It resembles what we nowadays would call greed: the insatiable desire for more. Mill (1836, p. 12) wrote: “Political Economy considers mankind as occupied solely in acquiring and consuming wealth; and aims at showing what is the course of action into which mankind, living in a state of society, would be impelled, if that motive (...) were absolute ruler of all their actions.” This article is about how individual differences in *greediness* for wealth manifest themselves in how hard people work and how much they earn.

Influenced by Mill's (1836) ideas, Keynes, 1963 predicted that around 2030, people would enjoy “the good life,” and only have to

work 15 h a week. After all, with higher productivity due to the industrial revolution, people could a) work less for the same amount of money, and b) and buy more as products would become cheaper. Despite massive economic growth and technological innovation, people nowadays are still working considerably > 15 h a week, including people who earn substantially more than would strictly be needed for “the good life” (Skidelsky & Skidelsky, 2012). Hsee, Zhang, Cai, and Zhang (2013, p. 852) coined the term *overearning* to refer to this “tendency to forgo leisure and earn beyond one's needs”. In the current research, we explore here the role of dispositional greed (Seuntjens, Zeelenberg, Van de Ven, & Breugelmans, 2015) in overearning, because we suspect that Keynes did not consider the “greediness” of people in predicting the reduction of hours worked. We examine whether greed, the insatiable desire for more, pushes people to work harder and earn more than is needed. An examination of overearning in terms of dispositional greed is important, as it provides a new, plausible, and testable explanation of this consequential phenomenon. Moreover, it sheds light on work motivation in general.

* Corresponding author at: Department of Social Psychology, Tilburg University, PO Box 90153, 5000LE Tilburg, the Netherlands.
E-mail address: Marcel@uvt.nl (M. Zeelenberg).

1. Overearning

There may be many reasons for people to earn beyond their needs (Hsee et al., 2013). For example, it is often not clear what is “enough”. People generally do not know when they will die, making it impossible to calculate exactly how much money they need after retirement. As such, it makes sense for people to err on the safe side and earn more than what they expect to need. People may also earn more than needed, to have a buffer in case of an emergency. Or, people earn more in order to bestow money on their children. Moreover, and contrary to the aversion to labor, people may earn more than they need because they actually like their work, enjoying the feelings of autonomy and meaning as well as the contacts with others (Schwartz, 2015). Despite these reasons, overearning brings along various costs, both direct and indirect.

Working too much increases financial resources, but also reduces the time that one can spend on other (enjoyable) activities, such as advanced education, hobbies, friends, and family. When balancing work and leisure, most people prioritize money over time, while choosing time over money is actually associated with more happiness (Hershfield, Mogilner, & Barnea, 2016; Mogilner, 2010; Whillans, Weidman, & Dunn, 2016). People who choose work over free time often experience regret later on, because they feel that they missed out on an opportunity to enjoy themselves. As a point in case, Ware (2011) wrote the book “The top five regrets of the dying” based on her experiences as a nurse in palliative care. Two of the regrets that patients report on their deathbed are relevant for our current discussion: “#2 I wish I didn’t work so hard”, and “#4 I wish I had stayed in touch with my friends”. Overearning also has societal costs, because it is wasteful when resources are acquired but not used while they could be used by others (Naish, 2008). Taken together, overearning seems to be prevalent (Skidelsky & Skidelsky, 2012; Ware, 2011), it leads to regret and reduces welfare, and may have large societal costs.

2. Understanding overearning

Hsee et al. (2013) developed a paradigm to study overearning in the laboratory. The paradigm ensures that that labor is aversive, and that wealth cannot be stored or transferred. As such, it controls for normative reasons for overearning, such as job satisfaction, uncertainty about the future, and the desire to bequeath money. In phase 1 of the paradigm, participants can choose to work by performing a tedious task (pressing a button and listening to white noise) with which they earn rewards (chocolates/jokes). Alternatively, they can choose to enjoy leisure time (listening to pleasant music). In phase 2, participants have a limited time to consume these rewards (eating chocolates/reading jokes). All rewards that are not consumed will be taken away by the experimenter (i.e., no savings for later and no inheritance). Thus, participants are faced with the decision how hard to work. Working too little leads to too few rewards. Working too hard produces too many rewards (i.e., overearning). Even in this minimalistic paradigm, many people work too much and earn more than they can consume.

Hsee et al.’s (2013) Study 1 examined the effects of earning rates (the amount of work needed to earn a reward) on overearning. People in the high-earning-rate condition ($n = 27$) needed to press the button and listen to the white noise 20 times to earn a 6-g bite-sized *Dove* milk-chocolate bar. People in the low-earning-rate condition ($n = 28$) needed to press 120 times. People in the high-earning-rate condition overearned, while those in the low-earning-rate condition did not. In Study 2, the authors investigated whether overearning could lead to an inferior consumption experience. Participants ($N = 40$) could earn jokes, but overearning would result in having too little time to read the jokes. Half of the participants were asked beforehand what the optimal number of jokes would be, which made the overearning disappear and made participants happier. Study 3 had a regular condition ($n = 22$), and an earning-cap ($n = 20$) condition in which participants received a message once they had earned 12 chocolates (based on a pretest) that

they could continue working, but would not earn more chocolates. Participants with the earning-cap worked less and overearned less, which suggests that they did not enjoy working. Moreover, they were happier than participants in the regular condition.

So why do people overearn? Hsee et al. (2013) propose that it stems from mindless accumulation. People work until they are tired, instead of stopping when they have accumulated enough. Making people aware of their consumption needs (by having them first predict their optimal consumption in Study 2) led to less mindless accumulation and less overearning.

Riedel and Stüber (2019, p. 5), in a close replication, “failed to replicate the Hsee et al. (2013) findings in a large sample of German students, and thus cannot confirm that mindless overearning as hypothesized by Hsee et al. (2013) is a quantitatively relevant phenomenon.” They speculated that overearning may not extend to Western societies. (Apparently, the Hsee et al. studies were run in China). In further studies, Riedel and Stüber found that people overearn when a task is more enjoyable, and when there is more uncertainty about the future. However, these were precisely the conditions that Hsee et al. deliberately excluded in the initial paradigm. Riedel and Stüber question the existence of overearning, because a) they do not find it and b) they attribute overearning, when it is observed, to “benign” reasons: people simply like to work or they like to earn more than they might need just to deal with possible uncertainty in the future.

In the current research, we first of all attempt a higher-powered replication of Hsee et al.’s (2013) work, to investigate whether overearning actually exists.¹ So far, all work on overearning is done with relatively small samples (the largest sample: $N = 67$). We contribute by adding several tests of overearning, each with much larger samples. But most importantly, we propose that in addition to mindless accumulation, task enjoyment or dealing with future uncertainty, greed may be a cause of overearning. We have several reasons to believe that this is the case, and that the effects of greed can already be seen in the data of Hsee et al. We explain this below.

3. Dispositional greed

Based on a literature review and an extensive prototype analysis with five studies, Seuntjens, Zeelenberg, Breugelmans, and Van de Ven (2015, p. 518) define greed as “desiring to acquire more and the dissatisfaction of never having enough”. Greed is almost a given in modern economic theorizing. Economic theory assumes that people always prefer more of a desirable good. This is called “the axiom of maximization” or “the axiom of greed” (cf. Lea, Tarpy, & Webley, 1987), and is seen as a virtue that leads to economic development and prosperity (Smith, 1776). Research found that greedy adolescents generate more income than less greedy ones (Seuntjens, Van de Ven, Zeelenberg, & Van der Schors, 2016). This view of greed as a motivation that helps an organism get what it needs, fits with an evolutionary perspective (Jett, 2000). This is the idea: always wanting more is costly, but having too little is costlier; hence greed has evolutionary benefits as it helps us to err on the safe side. Indeed, greed helps coping with resource insecurity and scarcity (Chen, 2018).

Greed thus motivates people to secure and increase resources. Because the motive of greed closely maps onto Mill’s (1836) notion of the pursuit of wealth, we expect it to be an important factor in overearning. We believe there are indications for the role of greed in Hsee et al. (2013). Hsee et al. argue that asking people to predict an optimum (Study 2) or introducing an earning cap (Study 3) diminished mindless accumulation. But we think that these interventions teach greedy people what is enough and what is too much, reducing their greed.

¹ We conducted our Study 1 and 3 in 2014, and hence were unaware of Riedel and Stüber (2019). Our findings question some of their main conclusions. We will get back to this in the discussion.

Making a prediction about the optimal number of jokes one can earn is likely to focus attention on that it is sub-optimal to engage in aversive work to earn jokes one will not read. Similar reasoning can be applied to the earning cap. An earning cap takes away the need for greedy people to work hard because the aversive work cannot satisfy the pursuit of wealth.

New developments in the psychology of greed may help us to understand overearning. Recent studies suggest there are clear and stable individual differences in people's propensity to be greedy (for overviews, see Lambie & Haugen, 2019; Mussel, Rodrigues, Krumm, & Hewig, 2018). In the present research we used the Dispositional Greed Scale (DGS; Seuntjens, Zeelenberg, Breugelmans, & Van de Ven, 2015). The input for the 7-item DGS was the earlier mentioned prototype analysis (Seuntjens, Zeelenberg, Van de Ven, & Breugelmans, 2015). The DGS proved to be reliable, temporally stable, and valid, and predicts greedy behavior in dictator, ultimatum, and public good games. In subsequent research the DGS predicted financial behavior (Seuntjens et al., 2016), and a variety of immoral attitudes and behaviors (Seuntjens, Zeelenberg, Van de Ven, & Breugelmans, 2019). Thus, research shows that greedy people want and take more. In relation to the phenomenon of overearning, we investigate whether they also work more and earn more.

Seuntjens, Zeelenberg, Breugelmans, and Van de Ven (2015) also examined the discriminant validity of the DGS in different samples of their Study 1. They related the DGS to scales that measure related individual differences in closely related motives. The results of a series of confirmatory factor analyses show that dispositional greed is distinct from *Maximization* (Schwartz et al., 2002), *Self-interest* (Van Lange, Otten, De Bruin, & Joireman, 1997), *Dispositional Envy* (Smith, Parrott, Diener, Hoyle, & Kim, 1999), and *Materialism* (Richins, 2004). Because the DGS correlated most strongly with materialism (see also, Krekels & Pandelaere, 2015), their Study 2 related dispositional greed and materialism to a number of behavioral inclinations. They found that while materialism was predominantly related to the desire for materialistic goods, greed was also related to the desire for nonmaterialistic goods. Thus, greed and materialism, although related, are not the same. Greed is the broader concept and is a desire for more of anything that is liked, including nonmaterialistic things such as food, sex, power, and success (cf. Seuntjens, Zeelenberg, Van de Ven, & Breugelmans, 2015).

There are now translated and validated versions of the DGS in Japanese (Masui, Shimotsukasa, Sawada, & Oshio, 2018), Brazilian Portuguese (Alves Freires, Lopes Loureto, Costa Ribeiro, & Oliveira Santos, 2019), and Mandarin Chinese (Liu et al., 2019).

4. The present studies

We test the idea that that dispositional greed is associated with overearning. Using the terminology of Mill, we believe that overearning exists because people value the pursuit of wealth more than they are aversive to labor. Study 1 tested this by relating dispositional greed (Seuntjens, Zeelenberg, Van de Ven, & Breugelmans, 2015) to people's actual incentivized behavior in Hsee et al.'s (2013) overearning paradigm. We add the results from a survey, examining in more detail whether the relationship between greed and overearning can be explained by greed increasing the pursuit wealth or by decreasing aversion to labor. Study 2 further examined the relationship between greed and the pursuit of wealth, by relating dispositional greed to time-money preferences and to satisfaction with life. Study 3 studied overearning in a longitudinal design, offering participants the opportunity to engage in the work-task twice. This made it possible for them to learn more about the specifics of the task, to learn about their own behavior, and how they evaluate the outcomes. If participants would again overearn at Time 2, and this would be predicted by greed, it would give more credence to the idea that greed causes overearning.

5. Study 1

5.1. Method

We decided to run this study for one week in the laboratory of a Dutch university, which typically gives 140–180 participants. Three of the 156 participants did not report correct ID numbers, so their behavior could not be matched with their greed scores. Participants ($N = 153$, $M_{age} = 20.33$, $SD = 2.38$, 69.3% female) received course credit or a €8.00 show up fee.

Participants came to the lab and were seated in separate cubicles, with headphones on in front of a PC. We replicated the paradigm from Hsee et al.'s (2013) Study 1 that consisted of two 5-minute phases. In the *Work Phase*, participants could relax and listen to classical piano music or they could “work” by pressing a key that interrupted the music with white noise for 0.2 s. A pretest ($N = 49$) showed that participants rated the music as being pleasant ($M = 4.53$, $SD = 0.79$), and the noise as unpleasant ($M = 1.67$, $SD = 0.92$), $t(48) = -16.80$, $p < .001$, $d = 3.34$ (1 = *very unpleasant*, 6 = *very pleasant*). For each 20 times participants pressed their key, to interrupt the music and expose themselves to the white noise, they earned a chocolate. In the *Consumption Phase* participants could eat the earned chocolates. They knew beforehand that both phases lasted 5 min and that remaining chocolates would be taken away by the experimenter. The number of chocolates

Table 1
Mean Scores, Standard Deviations, and Corrected Item-Total Correlations of the Items of the Dispositional Greed Scale (Seuntjens, Zeelenberg, Van de Ven, & Breugelmans, 2015) for all Studies.

Items	Study 1 <i>N</i> = 153 Dutch Students		Extra survey <i>N</i> = 297 U.S. M-Turk		Study 2 <i>N</i> = 472 U.S. M-Turk		Study 3-T1 <i>N</i> = 185 Dutch students		Study 3-T2 <i>N</i> = 99 Dutch students	
	<i>M</i> (<i>SD</i>)	<i>ITC</i>	<i>M</i> (<i>SD</i>)	<i>ITC</i>	<i>M</i> (<i>SD</i>)	<i>ITC</i>	<i>M</i> (<i>SD</i>)	<i>ITC</i>	<i>M</i> (<i>SD</i>)	<i>ITC</i>
	1. I always want more.	2.65 (0.97)	0.69	2.92 (1.01)	0.72	2.94 (1.14)	0.74	2.97 (1.06)	0.58	2.76 (1.20)
2. Actually, I'm kind of greedy.	2.54 (1.02)	0.61	2.58 (1.13)	0.75	2.40 (1.13)	0.67	2.69 (1.12)	0.54	2.68 (1.23)	0.70
3. One can never have too much money.	2.98 (1.16)	0.57	3.39 (1.25)	0.58	3.02 (1.26)	0.61	3.44 (1.24)	0.42	3.39 (1.20)	0.51
4. As soon as I have acquired something, I start to think about the next thing I want.	2.40 (0.96)	0.55	2.92 (1.14)	0.73	2.65 (1.20)	0.73	2.49 (1.17)	0.63	2.56 (1.16)	0.66
5. It doesn't matter how much I have. I'm never completely satisfied.	1.91 (0.71)	0.57	2.63 (1.17)	0.75	2.49 (1.11)	0.71	1.94 (0.95)	0.53	1.96 (1.03)	0.68
6. My life motto is 'more is better'.	2.02 (0.84)	0.63	2.57 (1.13)	0.76	2.48 (1.16)	0.76	1.93 (0.97)	0.57	1.92 (0.99)	0.58
7. I can't imagine having too many things.	2.33 (0.91)	0.59	2.67 (1.17)	0.71	2.47 (1.16)	0.60	2.35 (1.10)	0.56	2.23 (1.16)	0.62
Mean DGS.	2.40 (0.68)		2.81 (0.91)		2.63 (0.91)		2.54 (0.74)		2.50 (0.83)	
Cronbach's α	0.84		0.90		0.89		0.81		0.82	

Note: Participants were asked to indicate whether the items were descriptive of them. Responses are on a 5-point Likert scale (1 = *completely disagree*; 5 = *completely agree*). The 99 participants for Study 3-T2 were participants that did not participate at time 1, but only at time 2.

earned, but not consumed, is the measure of *overearning*. After participants completed the procedure, they filled out the DGS (see Table 1), and reported their liking for chocolate (1 = *not at all*, 7 = *a lot*; $M = 5.08$, $SD = 1.63$).

5.2. Results

5.2.1. Overearning

Because the number of chocolates earned and consumed was not normally distributed, we conducted a non-parametric paired-samples sign test to see if participants overearned. On average, participants earned more chocolates ($M = 5.29$; $SD = 7.33$; $Mdn = 3$) than they consumed ($M = 2.47$; $SD = 3.06$; $Mdn = 2$), $Z = -6.70$, $p < .001$. This means they overearned on average 2.82 chocolates ($SD = 5.51$; $Mdn = 0$), replicating Hsee et al. (2013). In total, 38.6% of the participants overearned, indicating they worked more than needed.

5.2.2. Dispositional greed and overearning

Because the number of chocolates earned, consumed, and overearned was highly skewed we conducted over-dispersion corrected Poisson regression analyses. This is the most appropriate analysis for count data (observations can only take non-negative integer values; Cameron & Trivedi, 2013). These analyses regressed the amount of chocolates earned, consumed, and overearned on greed, while controlling for liking chocolate.² See Fig. 1 for a graphical representation. As expected, greedy individuals *earned* more chocolates than less greedy individuals, $b = 0.37$, $SE = 0.15$, $t(150) = 2.47$, $p = .015$. The effect of greed on *consumption* was marginally significant, $b = 0.24$, $SE = 0.13$, $t(150) = 1.87$, $p = .064$. *Overearning* was also predicted by greed, $b = 0.49$, $SE = 0.21$, $t(150) = 2.27$, $p = .025$.

5.3. Discussion

Study 1 replicates the findings by Hsee et al. (2013) that people have a general tendency to overearn, casting doubt on the conclusion of Riedel and Stüber (2019) that overearning is not a substantive phenomenon and/or does not exist in Western countries. Most importantly, we find that dispositional greed is associated with the extent to which people overearn; greedier people overearn more. Apparently, there are motivational reasons for overearning.

Study 1 confirmed the predicted relationship between greed and overearning. There might still be a question *how* greed relates to overearning. Is it because greedier people have a stronger motivation to pursue wealth, or because they have a weaker aversion to labor? We expected the first, because greed is characterized by an insatiable desire for more. Greedy people are motivated to obtain more, but we see no reasons why greedy people would *like* working more.

To test this reasoning, we asked 297 US-based MTurkers ($M_{age} = 33.28$, $SD = 10.93$; 39.7% female) to participate in a short 3-min survey in return for \$0.30. We aimed for 300 participants, which would imply a power of 94% based on the effect size found in Study 1. Participants read the overearning paradigm instructions, listened to the music and white noise, and saw a picture of the chocolates used in Study 1. They then answered questions about how they would experience the task. *Aversion to labor* was measured with: "How attractive or unattractive would the white noise be?" *Pursuit of wealth* was measured with: "How attractive or unattractive would it be to earn chocolates?" We also included the question: "How attractive or unattractive would the music be?" ($-3 = \text{very unattractive}$ to $3 = \text{very attractive}$). Participants completed the DGS (see Table 1) either before or after answering the questions about taking part in the overearning study. At the end of the study participants rated their liking of chocolate (1 = *not*

at all, 5 = *a lot*; $M = 3.94$, $SD = 1.08$).

We found that labor was aversive. The white noise was rated significantly lower than the scale midpoint of 0, $M = -1.99$, $SD = 1.16$, $t(296) = -29.53$, $p < .001$, $d = 1.71$. Participants appreciated leisure, pursuing wealth, and chocolate. Both the music, $M = 1.74$, $SD = 1.28$, $t(296) = 23.53$, $p < .001$, $d = 1.37$, and the option to earn chocolates, $M = 1.07$, $SD = 1.63$, $t(296) = 11.37$, $p < .001$, $d = 0.66$, were rated to be attractive (i.e., significantly higher than 0). Participants also liked chocolate, $M = 3.94$, $SD = 1.08$, $t(296) = 14.95$, $d = 0.87$).

In a series regression analyses, we found no relationship between greed and the aversion to labor, $\beta = 0.07$, $t(294) = 1.22$, $p = .223$. There were also no relationships between greed and the attractiveness of the music, $\beta = 0.05$, $t(294) = 0.81$, $p = .420$, and between greed and liking chocolates, $\beta = 0.06$, $t(295) = 0.97$, $p = .332$. There was, however, the expected relationship between greed and the pursuit of wealth, $\beta = 0.11$, $t(294) = 2.18$, $p = .030$.

These results help shed light on *why* greedy people overearn. In this paradigm, greedier people found it more attractive to pursue rewards, but they did not find the work less aversive. Furthermore, greedier individuals also did not find the reward used in our studies to be more attractive. This suggests that greedy people get satisfaction out of the process of acquisition, rather than out of the actual consumption of rewards.

6. Study 2

Study 2 further investigated whether greedy people find the pursuit of wealth more important, using a different paradigm. If so, they should prioritize money over time. We were also interested in the effects of these time-money tradeoffs on well-being. Previous research found that both greedy people (Krekels & Pandelaere, 2015; Masui et al., 2018; Seuntjens, Zeelenberg, Van de Ven, & Breugelmans, 2015), and people that prioritize money over time (Hershfield et al., 2016; Mogilner, 2010; Whillans et al., 2016), are less satisfied with life. This leads us to the prediction that greedier people prefer money over time, which negatively affects their satisfaction with their life.

6.1. Method

We recruited US-based MTurkers ($N = 472$, $M_{age} = 37.14$, $SD = 11.45$, 48.3% female; 95% power to find an $r = 0.15$) for \$0.40 for a 4-min survey. Participants completed the DGS ($M = 2.63$, $SD = 0.91$; $\alpha = 0.89$), the Satisfaction with Life Scale (SWLS, Diener, Emmons, Larsen, & Griffin 1985; 1 = *strongly disagree*, 5 = *strongly agree*; $M = 3.30$, $SD = 0.98$; $\alpha = 0.91$), and three measures related to time-money preferences, all in a random order.

The first is the Resource Preference Measure (RPM; Hershfield et al., 2016). Participants report whether they want more money (-1) or time (1), and the extent to which they want that (0 to 7). This forms the measure of 'resource preference' ($-7 = \text{highest preference for money}$, $7 = \text{highest preference for time}$; $M = -0.33$, $SD = 5.54$). For the Resource Orientation Measure (ROM; Whillans et al., 2016), participants read about two people (one preferring money over time, and one preferring time over money) and indicate to what person they are most similar (54.0% indicated that they were more like the person who valued time over money). The third measure that we constructed ourselves, consists of two statements on the importance of time and money respectively (1 = *totally not important*, 5 = *very important*; $M_{time} = 4.13$, $SD = 0.83$; $M_{money} = 3.94$, $SD = 0.85$). Finally, participants completed demographic questions.

6.2. Results and discussion

Table 2 provides information the correlations between the variables. Two binary logistic regression analyses, with dispositional greed as a predictor and resource preference and resource orientation as

² Not controlling for liking chocolate yielded similar results across all analyses in all studies.

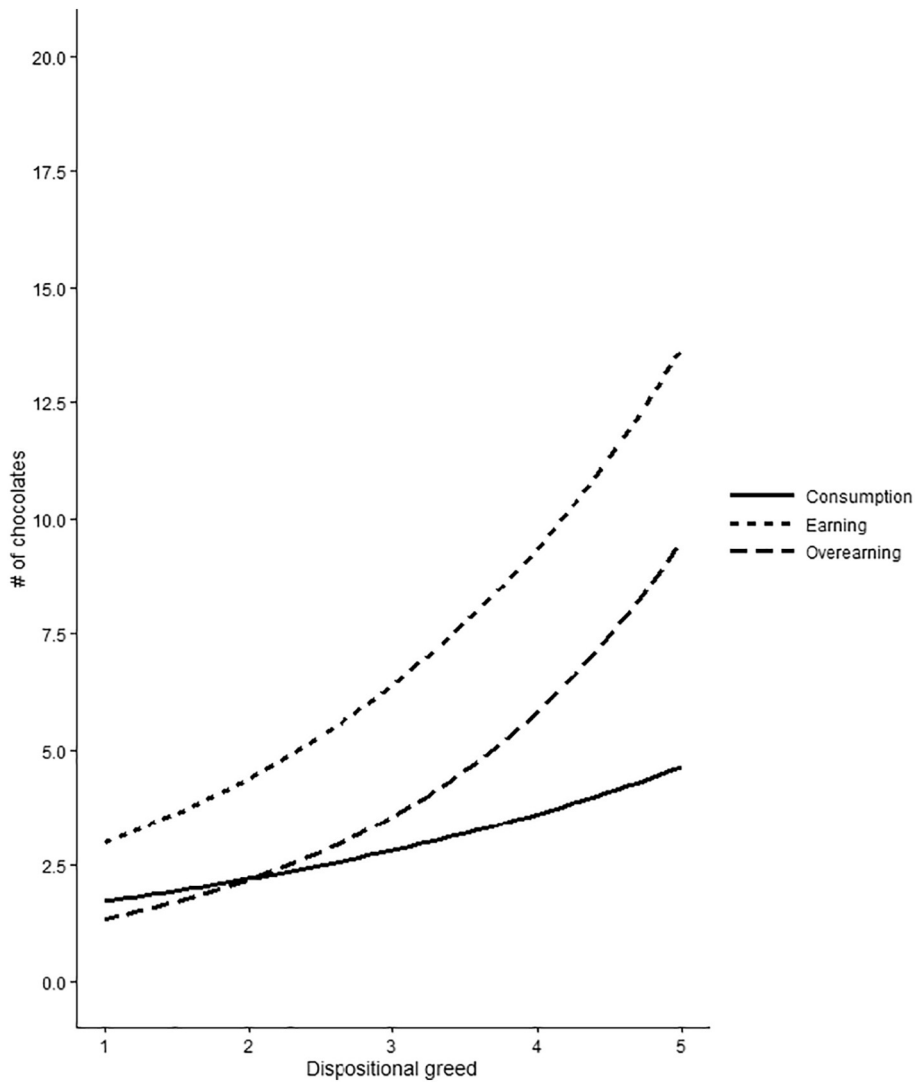


Fig. 1. The Poisson regression line indicating the amount of chocolates earned, consumed, and overearned as a function of dispositional greed in Study 1 (N = 156).

Table 2

Correlations between the variables in Study 2 (N = 472).

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
1. Dispositional Greed												
2. RPM ^a	-0.32											
3. ROM ^a	-0.34	0.73										
4. Time importance	-0.06	0.27	0.28									
5. Money importance	0.32	-0.38	-0.35	0.20								
6. Satisfaction with Life	-0.15	0.19	0.07	0.06	-0.05							
7. Time affluence	0.06	-0.30	-0.18	-0.09	0.15	-0.07						
8. Money affluence	0.09	0.14	0.03	-0.01	-0.07	0.39	0.01					
9. Annual income	0.10	-0.03	-0.15	0.00	0.08	0.21	-0.07	0.40				
10. Marital status	-0.01	0.01	0.02	-0.08	-0.07	0.26	-0.08	0.17	0.31			
11. Parental status	-0.07	-0.02	0.01	-0.07	-0.07	0.21	-0.07	0.09	0.18	0.51		
12. Age	-0.19	0.03	0.05	0.06	0.04	-0.04	0.02	-0.02	0.00	0.12	0.31	
13. Gender (1 = male, 0 = female)	0.11	0.02	-0.03	-0.05	-0.03	-0.11	0.03	0.12	0.03	-0.17	-0.31	-0.11

Note: Correlations of 0.10 and higher are significant at $p < .05$. Correlations of 0.12 and higher are significant at $p < .01$. Correlations higher than 0.17 are significant at $p < .001$.

^a Higher scores indicate a preference for time over money.

dependent variables, found that dispositional greed predicted a preference for money over time (RPM: odds ratio = 0.49, $Wald = 38.52$, $p < .001$; ROM: odds ratio = 0.44, $Wald = 48.53$, $p < .001$). The continuous RPM showed the same pattern, $\beta = -1.94$, $t = -7.29$, $p < .001$. Thus, greedy people seem to find money more important

than time.³

³ We controlled for demographic questions assessing age, gender, income, parental state, marital state, time affluence, and money affluence. Not

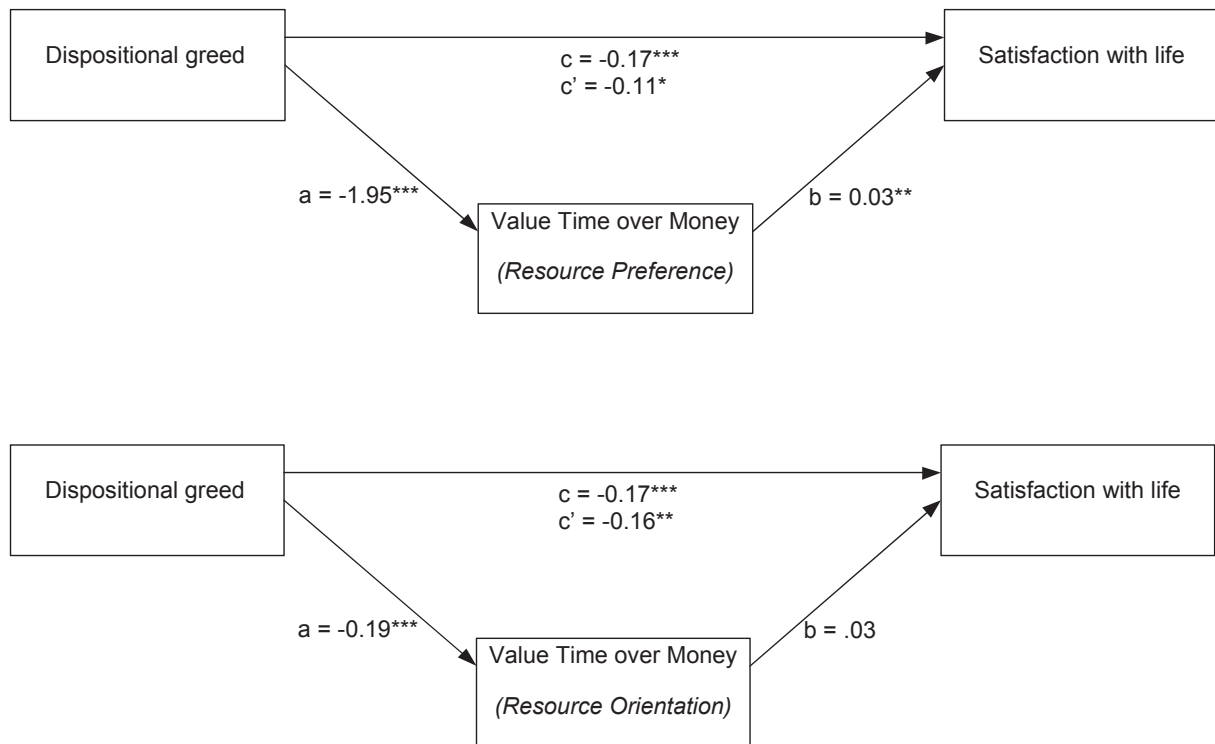


Fig. 2. Mediation between dispositional greed and satisfaction with life by the preference of time over money (measured with Resource Preference method and Resource Orientation method) in Study 2 ($N = 472$).

To test if the relationship between dispositional greed and satisfaction with life was mediated by resource preference, we conducted mediation analyses using the bootstrapping procedure of Preacher and Hayes (2008) with bias corrected intervals and 10,000 samples. As can be seen in Fig. 2, the RPM (95% CI: lower = -0.10 , upper = -0.02) partially mediated the effect of dispositional greed on life satisfaction. In contrast to our expectations, the ROM (95% CI: lower = -0.04 , upper = 0.03) did not mediate the relationship between greed and life satisfaction. This was the result of the absent direct effect of the ROM on satisfaction with life.

Study 2 thus conceptually replicates Study 1 in that it found that greed is associated with an increased desire for wealth. Replicating this with a totally different procedure, provides some external validity to these findings. The finding that greedy people prioritize money over time, might also partially explain why greedy people are less satisfied with their life.

7. Study 3

This final study addresses the relationship between dispositional greed and overearning using a repeated measures design, with the two measurements spaced four weeks apart. This allows participants to familiarize themselves with the procedure and to learn about how their actions influence their outcomes (Hertwig & Ortmann, 2001). In Study 1, it might be argued that overearning was the result of participants not fully understanding the paradigm, or that the relationship with greed could be explained by the uncertainty of the situation making people rely more on their greedy inclinations. Arguably, the overearning paradigm confronts participants with an unfamiliar and hence weak situation (cf. Mischel, 1968). In strong situations, there are clear cues of how to behave (e.g., you have to stop for a red traffic light). In weak

situations, these cues are more ambiguous (e.g., do you stop or speed for a yellow traffic light). Research finds that “dispositional effects are likely to be strongest in relatively weak situations and weakest in relatively strong situations” (Davis-Blake & Pfeffer, 1989, p. 387). Put differently, dispositional greed may be most likely to manifest itself and result in overearning, when the situation does not tell participants what to do. By having participants go through the whole procedure twice, we can examine this possibility. If we still find overearning at time 2, this is not likely to be the result of uncertainty exacerbating the effects of dispositional greed. Study 3 thus provides a stronger test of our hypothesis that greed causes overearning. In addition, Study 3 offers the opportunity to investigate the role of regret and (dis)satisfaction with prior overearning. It is well known that regret can lead to learning (Zeelenberg & Pieters, 2007); people who overearn more, probably regret more, and should thus learn more.

7.1. Method

We ran this study for one week in the laboratory, which resulted in 185 participants ($M_{\text{age}} = 19.74$; $SD = 2.14$; 81.6% female) completing the study at time 1. At time 2 (4 weeks later), 239 participants ($M_{\text{age}} = 19.96$; $SD = 2.52$; 79.7% female) participated, of whom 133 participants ($M_{\text{age}} = 19.63$; $SD = 2.12$; 86.5% female) also participated at time 1 and are included in this study. Participants received course credit or a €5.00 show up fee per session.

The method was similar to that of Study 1. At time 1, participants completed the overearning paradigm and the DGS ($M = 2.54$, $SD = 0.74$; $\alpha = 0.81$), the order of these two measures was counter-balanced. We also included questions about satisfaction and regret. After participants had earned chocolates, we asked them “How satisfied are you with the number of chocolates that you have earned in comparison to how hard you had to work?” ($-3 = \text{very dissatisfied}$, $3 = \text{very satisfied}$; $M = 2.23$, $SD = 1.12$). After the consumption phase was over and the experimenter had taken away the leftover chocolates, we asked them “How satisfied are you with the number of chocolates

(footnote continued)

controlling for these variables yielded similar results.

Table 3
Comparison of dependent variables at Time 1 and Time 2 in Study 3.

Variable	Time 1 N = 185				Time 2 N = 133				Time 1 – Time 2 N = 133		
	M	SD	Mdn	% > 0	M	SD	Mdn	% > 0	Z / t	p	d
Number of chocolates											
Earned	7.72	10.75	4	82.2	4.35	6.58	3	87.2	-3.18	.001	
Consumed	2.52	2.64	1	77.8	2.41	2.19	2	83.5	-0.42	.675	
Overearned	5.20	9.71	2	54.1	1.95	5.66	0	37.6	-4.05	.001	
Ratings											
Satisfaction with earned choco.	2.23	1.12			2.35	0.81			-0.094	.348	0.13
Satisfaction with leftover choco.	1.83	1.41			2.20	0.98			-2.79	.006	0.31
Regret about work	1.72	1.19			1.38	0.85			3.29	.001	0.33
Amount of work in hindsight	-0.37	1.16			-0.16	0.91			-1.67	.097	0.20

Note: We counted the number of chocolates earned, consumed and overearned. Satisfaction with earned and leftover chocolates was measured on a 7-point scale ranging from -3 = *very dissatisfied*, to 3 = *very satisfied*. Regret was measured on a 7-point scale ranging from 1 = *no regret at all*, to 7 = *a lot of regret*. Work in hindsight was measured on a 7-point scale ranging from -3 = *much less*, to 3 = *much more*.

that were left over in comparison to how hard you had to work?" (-3 = *very dissatisfied*, 3 = *very satisfied*; $M = 1.82$, $SD = 1.41$). In addition, we asked them: "If you look at the number of chocolates that you have left, how much do you regret all the work you did?" (1 = *no regret at all*; 7 = *a lot of regret*; $M = 1.72$, $SD = 1.19$) and: "In hindsight, would you want to work less, equal, or more?" (-3 = *much less*; 3 = *much more*; $M = -0.37$, $SD = 1.16$). Participants also rated their liking of chocolates (1 = *not at all*; 7 = *a lot*; $M = 5.33$, $SD = 1.38$). At time 2, the procedure was identical.

7.2. Results

7.2.1. Overearning at Time 1

The results are shown in Table 3. Replicating Hsee et al. (2013) and Study 1, participants earned more chocolates ($M = 7.72$; $SD = 10.75$; $Mdn = 4$) than they consumed ($M = 2.52$; $SD = 2.64$; $Mdn = 1$), $Z = -9.90$, $p < .001$. This means they overearned on average 5.20 ($SD = 9.71$; $Mdn = 2$) chocolates. In total 54.1% of participants overearned.

7.2.2. Dispositional greed and overearning at Time 1

Similar to Study 1, three Poisson regression analyses with an over-dispersion correction were conducted with greed as predictor and amount of chocolates earned, consumed, and overearned as dependent variables, while controlling for liking chocolate (See Fig. 3). Greedy individuals *earned* more chocolates than less greedy individuals did, $b = 0.36$, $SE = 0.13$, $t(182) = 2.69$, $p = .008$. We did not find an effect of greed on the amount of chocolates *consumed*, $b = 0.03$, $SE = 0.10$, $t(182) = 0.27$, $p = .791$ (this effect was marginally significant in Study 1). Most importantly, we replicated that *overearning* was predicted by greed, $b = 0.51$, $SE = 0.17$, $t(182) = 2.96$, $p = .003$.

7.2.3. (Dis)satisfaction and regret at Time 1

We were also interested in people's emotional reactions to overearning. We asked how (dis)satisfied participants were after they earned and overearned (-3 = *very dissatisfied*, 3 = *very satisfied*). Participants were satisfied after they earned chocolates ($M = 2.23$, $SD = 1.12$), but satisfaction dropped after the consumption phase ($M = 1.83$, $SD = 1.41$), paired- $t(183) = 4.38$, $p < .001$, $d = 0.31$. The more participants had earned, the more satisfied they were with their chocolates, $\beta = 0.15$, $t(182) = 2.08$, $p = .039$.⁴ However, as soon as leftover chocolates were taken away at the end of the consumption phase, and earning became overearning, the more participants *overearned*, the less satisfied they became, $\beta = -0.18$, $t(183) = 2.41$,

$p = .017$. There was no direct effect of greed on (dis)satisfaction after overearning, $\beta = 0.01$, $t(183) = 0.06$, $p = .949$. Interestingly, conducting a mediation analysis (with bias corrected intervals and 10,000 samples; see Preacher & Hayes, 2008), we found that the relationship between greed and satisfaction was mediated by overearning (95% CI: lower = -0.19; upper = -0.01). Thus, greed lead to more overearning, which reduced satisfaction.

For regret, we found a similar pattern. Participants who had overearned more, regretted the amount of work more than participants who had not overearned as much, $\beta = 0.32$, $t(183) = 4.64$, $p < .001$. We did not find a direct effect of greed on regret, $\beta = 0.09$, $t(183) = 1.26$, $p = .209$. Mediation analysis revealed that the relationship between greed and regret was mediated by overearning (95% CI: lower = 0.04; upper = 0.21). In addition, the more participants indicated that they regretted the amount of work they did, the more they indicated that in hindsight they should have worked less, $\beta = -0.45$, $t(183) = 6.72$, $p < .001$.

7.2.4. Overearning at Time 2

We found that the 133 participants (see Table 3) who had participated at time 1 still overearned at time 2 ($M_{earning} = 4.35$, $SD = 6.58$, $Mdn = 3$; $M_{consumption} = 2.41$, $SD = 2.19$, $Mdn = 2$; $M_{overearning} = 1.95$, $SD = 5.66$, $Mdn = 0$), $Z = -6.93$, $p < .001$, but overearning was lower at time 2 ($M = 1.95$, $SD = 5.66$, $Mdn = 0$) compared to time 1 ($M = 4.65$, $SD = 8.92$; $Mdn = 2$), $Z = -4.05$, $p < .001$. At Time 2, 37.6% of the participants still overearned.

We compared first-time participants ($N = 99$) at time 2, with those who participated also at time 1 ($N = 136$)⁵ using a Mann-Whitney U test. Participants who participated for the first time ($M = 3.27$, $SD = 7.26$, $Mdn = 0$) overearned more than participants that did the study for the second time ($M = 1.91$, $SD = 5.60$, $Mdn = 0$), $U = 5555.00$, $p = .011$. Of the participants who participated for the first time, 49.5% overearned, whereas only 36.8% of the second time participants overearned. People thus learn from prior overearning, and overearn less a second time, though overearning still exists.

7.2.5. Dispositional greed and overearning at Time 2

We conducted over-dispersion corrected Poisson regression analyses with greed as predictor and amount of chocolates earned, consumed, and overearned as dependent variables, while controlling for liking

⁵ The number of participants who indicated that they participated for the second time is 3 persons higher than the number of participants that we actually have data of at two times. We could not link the data of them because the identification numbers were incorrect. Also 4 participants left this question blank.

⁴ One participant did not answer how satisfied he was with their chocolates.

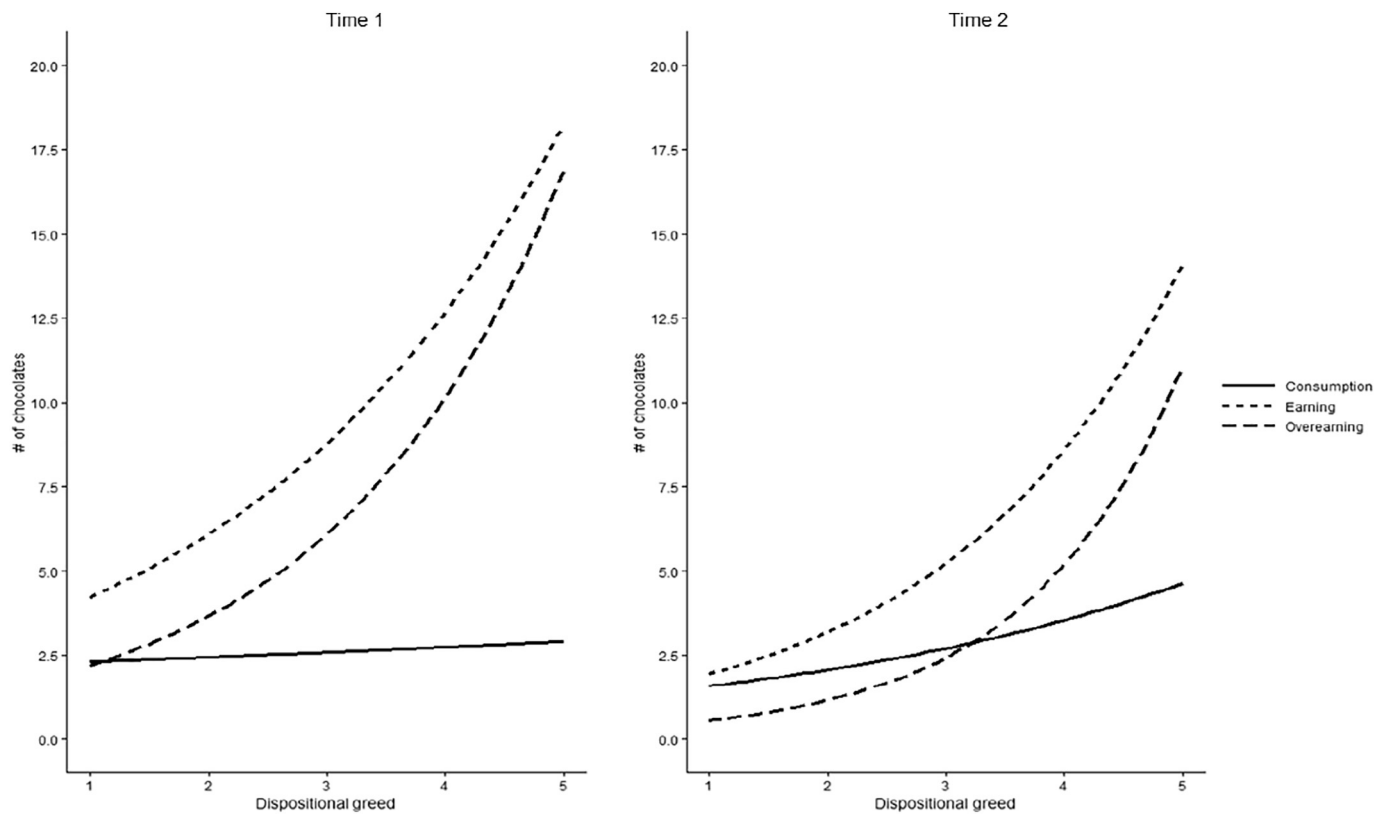


Fig. 3. The Poisson regression line indicating the amount of chocolates earned, consumed, and overearned as a function of dispositional Greed in Study 3 at Time 1 ($N = 185$) and Time 2 ($N = 133$).

chocolate (see Fig. 3). Again, the greedier individuals were, the more chocolates they *earned*, $b = 0.48$, $SE = 0.15$, $t(130) = 3.30$, $p = .001$. Greedier participants also *consumed* more chocolates, $b = 0.26$, $SE = 0.09$, $t(130) = 2.91$, $p = .004$. Most importantly, we replicated that *overearning* was predicted by greed also at time 2, $b = 0.75$, $SE = 0.28$, $t(130) = 2.68$, $p = .008$.

7.2.6. (Dis)Satisfaction and regret at Time 2

Participants were more satisfied with the chocolates before consumption ($M = 2.35$, $SD = 0.81$), than after having returned the leftovers ($M = 2.20$, $SD = 0.98$), $t(132) = 2.14$, $p = .035$, $d = 0.16$. Overearning ($\beta = -0.06$, $t(131) = 0.64$, $p = .526$) and greediness ($\beta = 0.03$, $t(131) = 0.38$, $p = .702$) did not influence satisfaction after having returned the leftovers. There was an effect of overearning on regret, $\beta = 0.20$, $t(130) = 2.28$, $p = .025$, and an effect of greed on regret, $\beta = 0.19$, $t(130) = 2.22$, $p = .028$.⁶ Individuals that overearned more and those that were greedier regretted their behavior more.

Participants overearned less at time 2 than at time 1. If we look at possible reasons for this, we find that the more participants indicated at time 1 that, in hindsight, they had wanted to work less, the less hard they worked at time 2, $b = -0.43$, $SE = 0.20$, $t(131) = -2.18$, $p = .031$. However, satisfaction after overearning at time 1 did not predict overearning at time 2, $b = -0.06$, $SE = 0.17$, $t(131) = -0.33$, $p = .740$. Nor did regret after overearning at time 1 predict overearning at time 2, $b = 0.17$, $SE = 0.19$, $t(131) = 0.90$, $p = .373$.

7.3. Discussion

Study 3 measured overearning at two points in time. This is

⁶ One participant did not answer the regret question, hence the lower degrees of freedom.

important for two reasons. First, it shows that overearning is not a one-time effect that is simply due to uncertainty and unfamiliarity with the situation. Second, it gave us the opportunity to investigate whether people learn from previous overearning. We found that participants on average did learn from prior overearning. However, we also found that, even when doing exactly the same overearning paradigm twice, greedy people still overearn more than their less greedy counterparts.

If we look at Fig. 3, it also seems that participants who scored very low on greed overearned a little at Time 1 but not anymore at Time 2; the main overearning at Time 2 was found among greedy people. Hsee et al. (2013) found that when people deliberated about their future consumption, they overearned less. They speculated that this was support for mindless accumulation of overearning. Although we do find less overearning at Time 2, we also still find that dispositional greed relates to overearning even when people experienced it before. At the very least, greed is thus an additional motivation for overearning.

Study 3 also looked at satisfaction and regret. At time 1 we find that greed leads to more overearning, which in turn leads to less satisfaction and more regret. Time 2 shows a slightly different pattern: There was no relationship among greed, overearning, and regret. Greedy people did experience more regret over their outcomes than less greedy individuals. Moreover, participants that felt that they should have earned less at time 1 actually did so at time 2.

8. General Discussion

We examined the role of dispositional greed in overearning. Our research replicates and extends the pioneering work of Hsee et al. (2013), finding in contrast to Riedel and Stüber (2019) that overearning is a robust phenomenon. Study 1 found that greedy people are more susceptible to overearning. An additional survey and Study 2 suggested that this effect is driven by greedy people's stronger pursuit for wealth, not their lower aversion to labor. Study 3, with two measurements of

overearning four weeks apart, replicated and extended the results of Study 1, finding again that greedier individuals overearned more and that overearning was associated with more regret and less satisfaction about the outcomes. This suggests that participants themselves realized that overearning is disadvantageous. Interestingly, they were able to learn from these feelings: participants who indicated in hindsight that they would have liked to work less at time 1 actually did so at time 2. But, and this shows the strength of dispositional greed, even at time 2 greedy participants overearned by a large degree. This shows that overearning cannot solely be attributed to unfamiliarity with the task, or simple mispredictions of consumption.

Taken together, the studies provide strong indications for greed as a motive to overearn. Hsee et al. (2013) argued for mindless accumulation of goods as an explanation of overearning. Based on the current research, it is not yet clear whether dispositional greed is a supplemental explanation or an alternative explanation for overearning. Hsee et al. do not measure mindless accumulation but inferred this from people's behavior (see also, Riedel & Stüber, 2019). They argue that remembering people of the optimal amount of earnings or using earning caps reduces mindless accumulation. We think that such interventions reduce greed. Making people aware of one's optimal earnings or including earning caps could also lower greed by making people aware that there is something as earning too much. This research cannot answer the question if mindless accumulation and greed both explain overearning, or that greed is an alternative explanation for overearning. However, it does teach us that greed does play a role in overearning.

8.1. Understanding overearning

Riedel and Stüber (2019) could not replicate the findings of Hsee et al. (2013), questioning whether a) overearning was a substantive phenomenon, b) whether it existed in Western countries, and c) whether mindless accumulation plays a role in overearning. If we add our three direct replications to the data from Hsee et al.'s of Riedel and Stüber, we think there is overall evidence of overearning, also in Western countries. Table 4 contains the results of all studies of the basic effect. We cannot be certain about why Riedel and Stüber did not find the effect. It might be a false negative (their sample of 67 participants is larger than that of Hsee et al., but still not very large). However, there may also be a substantive reason, namely the setting of the experiment. They used open cubicles where there was some, but still limited privacy (in contrast to the individual, closed cubicles that we used). As social norms likely influence people's consumption of candy, this might have had an effect. However, this is still open for further study.

Besides showing that greed plays a role in overearning, the current research also teaches us several things about overearning itself. This research shows that overearning is not a one-time effect. Our Study 3 is

the first that adopted a repeated measures design in which overearning was measured twice. This gave participants the opportunity to learn from their own actions and outcomes. If overearning were solely the result of people being unfamiliar with the paradigm, we should not have found overearning at time 2. However, we did find overearning at time 2, meaning that even when people know how much they can consume, they still overearn. Overearning is thus not simply the result of people not knowing how much to earn.

Although overearning still occurred at time 2, we did find a learning effect. People over earned less at time 2. Especially those who indicated at time 1 that they wanted to work less a second time. Hsee et al. (2013) found that participants were quite accurate at making predictions about how much they would consume when asked to make them, but spontaneously they did not make them. The present research suggests that people do not make accurate predictions at first, but learn to do so, after they have received feedback on prior behavior.

A possible explanation for why people learn, is that they feel dissatisfied and regret after overearning (Zeelenberg & Pieters, 2007). Study 3 investigated this. At time 1, we found that people that overearn are less satisfied and experience more regret. At time 2, however, overearning was only associated with more regret, not with less satisfaction. Greedy people regretted the number of chocolates they earned more. Although the findings were not completely consistent across time, there seems to be a relationship between wanting to acquire more and feeling less satisfied and more regretful. This is consistent with previous research that found that greedy people are in general less satisfied (e.g., Krekels & Pandelaere, 2015; Seuntjens, Zeelenberg, Van de Ven, & Breugelmans, 2015). Moreover, we found that people, who indicated at time 1 that they would work less in hindsight, actually did work less at time 2. People who are not happy about how much they overearn are able to adjust their behavior so they overearn less a second time.

8.2. Overearning in the lab versus in real life

We studied overearning using the paradigm developed by Hsee et al. (2013). This is an elegant paradigm and there are good reasons for using it. The paradigm is minimalistic and simulates a real-life situation, similar to other experimental games. Using a minimalistic paradigm helps to control for normative reasons that could otherwise explain overearning. In real life, there are multiple reasons for people to earn more than they can consume. People often want to earn more than they can spend so they have extra money in case of an emergency or because they want to bestow it on their children. Indeed, Riedel and Stüber (2019) find that creating more uncertainty about how much one needs likely increases overearning. But this is exactly why we think that using the minimalistic paradigm of Hsee et al. allows the opportunity to

Table 4
Overview of past and current tests of the overearning effect.

Study	Hsee et al.		Riedel & Stüber		This manuscript			
	1	3	1		1	3-T1	3-T2a	3-T2b
N=	28	21	67		153	185	99	133
Number of chocolates								
Earned	10.74 (11.24)	14.59 (11.76)	4.69 (5.22)		5.29 (7.33)	7.72 (10.75)	5.53 (8.12)	4.35 (6.58)
Consumed	4.26 (5.56)	6.68 (4.50)	3.76 (3.97)		2.47 (3.06)	2.52 (2.64)	2.25 (2.24)	2.41 (2.19)
Overearned	6.48 ?	7.91 ?	0.93 (2.88)		2.82 (5.51)	5.20 (9.71)	3.27 (7.26)	1.95 (5.66)
Overearned/Consumed	1.52	1.18	0.25		1.14	2.06	1.31	0.79
% overearning	?	?	20.9%		38.6%	55.1%	45.5%	36.8%

Note. This table is an expanded version of Table 1 of Riedel and Stüber (2019). Hsee et al.'s (2013) Study 3, Riedel & Stüber' Study 1, and our studies 1, 3-T1, and 3-T2a are direct replications. Hsee et al.'s Study 1 and our studies required 20 instances of "work" (pressing the space bar) to earn a chocolate, while the Riedel & Stüber studies required 10 instances of "work". Our Study 3, Time 2 results are split up in 2 groups. The Study 3-T2b sample are the ones who had also participated in Study 3-T1, and are thus not a direct replication as they had prior experience with the task. However, to be able to get that data we needed to recruit from the full sample, giving us another 99 participants (sample 3-T2a) who did participate for the first time, making this group another direct replication of the other studies.

study the essence of overearning, while controlling for these other reasons.

Nevertheless, using a minimalistic paradigm limits the external validity of our findings. Our Study 2 uses other measures *related* to overearning (preferring money over time), but does not directly measure overearning. A logical next step would be to investigate overearning in a real-life setting. Inequality is rising, and the rich do not spend enough of their capital to keep the economy going. A possible explanation for people to keep earning, even when they have more than enough is that they overestimate the association between happiness and income (Aknin, Norton, & Dunn, 2009). Although there is a small relationship between income and happiness, this association disappears above an annual income of \$75,000 (Kahneman & Deaton, 2010). Moreover, previous research suggests that people that value time over money are happier than people that value money over time (Whillans et al., 2016). Thus, people have the tendency to attribute happiness to money, while this is generally not the case.

If we want to study overearning in real-life, we have to deal with several problems. First, in real life it is hard to determine whether people actually overearn. Life is often unexpected, and therefore, people might only be able to determine if they have overearned at the end of their lives. For example, when they are younger, people might want to accumulate savings because they expect that they need this money at a later moment in time. Only at the end of life, people can assess if this was indeed necessary, or if they have overearned. A possible solution to deal with this is to study the elderly. At the end of life, people might be better able to determine whether they have earned too much, and whether they wished they had spent their time in a different way. It is likely that such a finding would occur, as having worked too hard is one of “the top 5 regrets of the dying” (Ware, 2011).

It might also be possible to investigate overearning in younger people. Although in that case, we would have to use a different approach. In this case, it is not possible to investigate overearning in the absolute sense. That is, we do not know if they have worked too much or too little because we do not know how much money they need in the future. It is, however, possible to investigate how satisfied they are with the amount of free time they have and with the amount of money they have. Previous research found that people that prioritize time over money are happier than people who prioritize money over time (Whillans et al., 2016). If we would find that people indicate that they do not have enough leisure time, but do have enough money, this would be another indication of overearning. In sum, it is difficult to study overearning in real-life, because there are other reasons to earn more than one can spend. However, studying overearning in real life could complement these findings and help test the external validity of these findings.

8.3. Understanding dispositional greed

The current research also gives us new insights in dispositional greed. The findings speak to general ideas about the productive nature of greed in economic theorizing. We found that greedy people worked harder, earning more rewards. This corroborates ideas in economics about greed being the motor of economy, promoting hard work, and creating more income (Melleuish, 2009). To the best of our knowledge, the findings in Studies 1 and 3 constitute the first empirical demonstration of this productive power of greed. At the same time, however, the finding that greed can result in working more than needed (even when the work is unattractive) clearly demonstrates the potential inefficiency of greed and indicates a limit to its productivity.

What is also interesting is that greedy people do not necessarily consume more resources. Moreover, they indicated that they liked ‘earning’ chocolates more, although they did not have a stronger preference for chocolate. This suggests that the satisfaction that greedy people get out of overearning likely stems from the earning, or *acquisition*, of resources, not because they get more satisfaction out of the

consumption. This fits with laypeople's ideas of greed being highly acquisition motivated (Seuntjens, Zeelenberg, Breugelmans, & Van de Ven, 2015). For greedy people acquisition might be an endpoint, instead of a means to fulfill one's desires.

The current research might also help explain why greedy people have lower life satisfaction (Krekels & Pandelaere, 2015; Seuntjens, Zeelenberg, Van de Ven, & Breugelmans, 2015). People that focus too much on money or work, and not enough on free time are typically less happy (Hershfield et al., 2016; Mogilner, 2010; Whillans et al., 2016). If greedy people are too focused on earning more resources, this will come at the cost of other important needs, such as more free-time that can be spent on social interactions and enjoying the good things in life. This might lead to regret and dissatisfaction because people feel that the time they have invested in their work could have been better spent on family, friends, and free time (Ware, 2011). In other words, greedy people may maximize wealth, but do not appear to maximize well-being.

9. Conclusion

In a series of studies, we investigated the relationship between dispositional greed and overearning. We found consistent support for a general tendency to overearn, which is amplified for individuals high in greed. Greedy people overearn, not because they like working more, but because they find acquiring goods more desirable. However, people who overearn are less satisfied with their outcomes than those that do not overearn. Finally, we find that people learn from overearning, but that this learning is not optimal. They continue to overearn, but less so. This holds for greedy and non-greedy people.

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