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Working until you drop: Image concerns or prosocial motives?

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Working until you drop: Image concerns or prosocial motives?

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Working until you drop: Image concerns or prosocial motives?

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Abstract

Working until you drop: Image concerns or prosocial motives?

by Hande Erkut and Shaul Shalvi*

Working hard is costly, so people should work wisely. Yet, they do not always work efficiently, spending their effort on tasks that do not bring tangible benefits. One reason that potentially amplifies inefficient working is that people work in social environments where they are observed and where others' earnings also depend on their effort. In this paper, we investigate whether people work and earn more than they need, and if so why? We use laboratory experiments to disentangle two concerns that potentially lead people to work inefficiently hard, namely image concerns and prosocial motives. Our results suggest that people indeed overwork unnecessarily, and that this is mainly due to image concerns.

Keywords: overworking, image concerns, social preferences

JEL classification: C91, D91, J22

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Introduction

Working hard is a trait that typically attracts much praise. Nevertheless, working hard does not mean working smart. In particular, working hard does not always translate into productivity: The most hard-working people are not the most productive ones (Pencavel 2015), and the same holds for countries (OECD 2019). Among many other reasons, one potential reason behind this fact is that working hard is costly. Employees who work beyond their limits face physical and psychological health problems, such as anxiety and burnout, which lead them to be less productive.¹ Given potential employee health problems and the resulting productivity losses caused by excessive working, it is crucial to understand the mechanisms that lead employees to *overwork* i.e., to work up to a point where additional work does not result in additional monetary benefits.²

Most people work in social environments, and this setting may for several reasons lead to working inefficiently hard. First, people may overwork due to feeling responsible for their coworkers. It is common that several employees are assigned to work on the same project, and successful projects have monetary and non-monetary benefits for project members. A socially minded employee may expend greater effort on a project where her effort influences others' benefits as well as her own. Second, people may overwork due to image concerns. Even in cases where employees work for their own benefit (e.g., working on an individual project), they may work harder when their effort level is observed by others. This might happen due to reputation building concerns or due to a concern about performing better than others i.e., (symbolic) status-seeking.

In this study, we use laboratory experiments to disentangle two potential motives for overworking mentioned above, namely responsibility for others and image concerns. For this purpose, the use of laboratory experiments is essential to create an environment where there is an optimal amount of working and working more than the optimal amount does not result

¹It has been shown that more than half of employees in the US feel overworked and overwhelmed (Galinsky et al. 2005).

²We define overwork as such for the sake of the current study, whereas overwork is most commonly defined as excessive work.

in a benefit. In our experimental setting, which is a modified version of the one proposed by Hsee et al. (2013), subjects do a real effort task and earn consumption goods that can only be consumed in the laboratory. This setting allows us to measure overworking by giving subjects the opportunity to work more than they need.

Effort provision in social environments is widely investigated in the literature. Van Dijk et al. (2001) show that people exert similar effort levels in individual and team incentive schemes. However, this result does not imply that effort provision is similar in individual and team environments. As the authors show, in comparison to the individual incentive scheme, some subjects free ride in teams whereas others increase their effort. As a result, this balances out the total effort exerted in the team setting. Corgnet et al. (2015) run a real effort experiment and compare individual and team production incentive schemes under settings where subjects either have a leisure option (browsing the internet) or not. Their results suggest that production is larger in the team setting than in the individual incentive setting when the leisure option is available. Note that in these studies, team members observe each others' effort levels when they are informed about the team earnings, hence both shared earning and observability elements are present in the team setting.

People's effort is influenced by being observed by others, even in settings where the benefits created by effort provision are not shared.³ There are various studies documenting that people are motivated by image concerns in effort provision, i.e., they increase their effort when their effort level will be identified by others, both in flat-wage and piece-rate wage settings. For instance, in a laboratory setting with flat wages, Charness et al. (2013) found that the average effort level of subjects is higher when they are informed about their relative performances. Also, Schram et al. (2019) investigate a piece-rate wage setting where they compare subjects' effort levels in a case in which subjects report their scores from a real effort task to a person who does not know the task to a case in which subjects also report their scores out loud to the other subjects who have completed the same task. Their results

³Note that this is different from being observed while working. The literature documenting peer effects show that people are influenced by their peer's effort level in case where they can observe each other while working (e.g., Falk and Ichino 2006; Mas and Moretti 2009).

suggest that men exert greater effort in the latter than in the former case, suggesting that men are status-seeking.

The studies discussed above investigate two extremes of the relationship between effort and earnings. In flat-wage regimes, people’s earnings are independent from their effort, and in piece-rate regimes, people’s earnings linearly increase with effort. Nevertheless, in real life, the relationship between effort and earnings is more complex, which makes it harder for workers to choose an effort level, and consequently leaves greater room for mistakes in effort choice. Such a setting, where people can work inefficiently hard, was first investigated by Hsee et al. (2013) (subsequently HZCZ) using laboratory experiments. In their paper, subjects could individually allocate their time in the laboratory between work (i.e., listening to an annoying sound) and leisure (i.e., listening to music). People earned chocolates by working, and these chocolates could only be consumed in the laboratory. Hence, their setting allows scope for inefficient effort choice by allowing subjects to overearn, i.e., earn more than they could consume. Their results suggest that people earned more chocolates than they consumed. However, in an attempt to replicate the overearning result, Riedel and Stüber (forthcoming) ran laboratory experiments using the original version as well as the modified versions of the individual setting of HZCZ, and did not find evidence of overearning.

In this study, we investigate group settings and seek to disentangle the role of responsibility for others and image concerns in overworking by using three between-subjects treatments. In our baseline (*Single*) treatment, subjects’ work/leisure decisions only influence his or her own earnings. In the *Partner* treatment, subjects are paired into groups of two and earnings are shared equally between the group members. Finally, in the *Image* treatment, subjects are again paired into groups of two and the effort level information is shown to the group members. In contrast to the *Partner* treatment, earnings are not shared between group members in the *Image* treatment. The *Image* treatment allows us to disentangle image concerns from prosocial motives for the group member: image concerns are potentially present both in the *Partner* and *Image* treatments, whereas prosocial motives toward the peer may only be present in the *Partner* treatment.

Our results show that people overwork i.e., earn more than they consume, in all treatments.

Overworking is not significantly different in *Partner* and *Image* treatments, and it is larger in both treatments than in the *Single* treatment. When we control for several factors such as potential experimenter demand effects and the uncertainty about future consumption, we do not observe overworking in *Single* treatment anymore, whereas overworking in the *Partner* and *Image* treatments still hold. These results suggest that overworking emerges in settings involving multiple workers and that image concerns are the main driving force behind this.

Our paper is organized as follows: In the next section we introduce the experimental design and the hypotheses. Afterwards, we present the results. Finally, we discuss potential explanations for the results, and conclude the study.

Experimental design

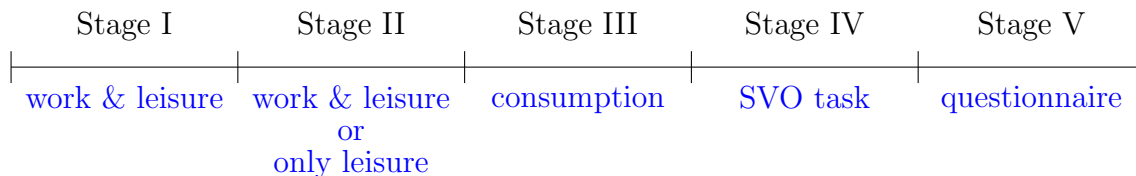


Figure 1: Timeline of the experiment

The timeline of the experiment is given in Figure 1. In Stage I, subjects have two different activities with which they can spend five minutes: they can listen to music (mimicking leisure), or they can do a real effort task (slider task (Gill and Prowse 2012)) while listening to an annoying sound of 65 dB (mimicking work). Subjects can switch between these two activities during the stage. The slider task requires participants to drag sliders to the 50 position mark (the range is 0 to 100). Subjects earn one token for each slider they drag to position 50 and they can observe the amount of tokens they earn on their computer screens. They are informed that they can use these tokens to buy consumption goods to be consumed

in the laboratory.⁴ In Stage II, we ask them whether they would like to have the opportunity to work more on the slider task and earn some extra tokens to be spent on consumption goods. Stage II aims to measure underearning by giving subjects the opportunity to earn extra tokens in case they did not earn enough in Stage I. As in Stage I, subjects who choose to take the opportunity to earn more tokens can either listen to music or do the real effort task. Subjects who choose not to take the opportunity to earn more tokens listen to the music during Stage II. In Stage III, subjects buy food with the tokens they earn and consume them.⁵ The stages I, II, and III last five minutes each. In the subsequent stages, subjects complete the incentivized Social Value Orientation (SVO) task introduced by Murphy et al. (2011) and the questionnaire.

The annoying sound was added to the slider task in order to make sure that subjects preferred the leisure time to the work time. In the pilot sessions of this study where the annoying sound was not played during the slider task, the self-reported enjoyment from the slider task was not significantly different from the self-reported enjoyment from listening to the music. By adding the sound in the later sessions, we made the work time less enjoyable than the leisure time. Subjects' self-reported enjoyment is elicited using a seven-point Likert scale. Their mean self-reported enjoyment from the slider task with sound (2.57) is significantly less than their enjoyment from listening to the music (4.83) based on a signed-rank test ($p < 0.001$).

We measure overworking in two ways. First, we measure the actual unspent earnings based on actual consumption i.e., the difference between the amount of tokens earned in stages I and II, and the tokens spent on consumption goods. Second, we measure the unspent earnings based on a predicted optimal amount of consumption i.e., the difference between

⁴Subjects can buy five different types of goods: Banana, Hanuta, Kinder country, Bifi, and orange juice. These goods are chosen to give subjects a variety of options based on their snack consumption preferences. In choosing these snacks, we took the price and popularity of them into account.

⁵The consumption stage proceeds as follows: First, subjects indicate the items and the quantity of the items they want to buy using the 'shopping cards' distributed by the experimenters. Then, experimenters collect all the shopping cards and bring the requested food to the subjects. Subjects start to consume at the same time and stop eating after 5 minutes. Finally, the experimenters collect unconsumed items and the packages of the consumed items.

the amount of tokens earned in stages I and II, and the amount of tokens that can buy the optimal amount of consumption goods. The latter is to control for the possibility that subjects' consumption decisions are influenced by their earnings. In order to measure the optimal amount of consumption, we ran two control treatments. In the first control treatment named *Cons*, we let a group of subjects eat as many consumption goods as they wish in five minutes. In the second control treatment named *Cons_work*, we aim to control for the potential influence of working at the consumption level. So in the *Cons_work* treatment, we let another group of subjects eat as many consumption goods as they wished after performing the slider task for five minutes.

Unlike HZCZ, our design can detect underworking and underearning as well as overworking and overearning. We calibrated the price of consumption goods in such a way that if a person works full time in Stage I she does not need to work in Stage II, as the tokens she has earned is enough to buy more consumption goods than she can consume in five minutes. It is in subjects' best interest to earn enough in Stage I, since they do not know whether they can work more in Stage II.⁶ Yet, the existence of Stage II lets us detect underearning in Stage I, if there is any. We identify underearning as follows: A subject underearned in Stage I if she chose to work in Stage II and the amount of tokens she spent on consumption was more than the earnings in Stage I.

We have three primary treatments. In the *Single* treatment, we investigate subjects' work/leisure decisions in cases where everybody's effort is private and only influences his or her own earnings. In the *Partner* treatment, each subject is randomly paired with another subject, and both subjects' earnings are summed up and equally shared between them. Finally, in the *Image* treatment, each subject is randomly paired with another subject and although effort only influences one's own earnings, the effort level information is shown to the matched partner before the consumption stage.

The experiment was programmed in z-Tree (Fischbacher 2007) and was conducted at the

⁶At the beginning of the experiment, we informed subjects that there would be several stages in this experiment. However, we did not give detailed information on the stages, hence they did not know that they would have a chance to work and earn more until after they had finished Stage I.

WZB-TU laboratory for experimental economics in Berlin with students recruited through ORSEE (Greiner 2015). The instructions can be found in Appendix A. In total, 302 subjects participated in the experiment in 15 sessions. We have 53 observations from the Single treatment, 98 from Partner, and 52 from the Image treatment. Moreover, we collected information on the optimal consumption from 99 subjects (49 without work, and 50 after work).

Hypotheses

We expect that the differences in overworking between treatments will be driven by the effort exerted and not by a change in the amount consumed. Hence, we form our hypotheses by focusing on the factors that could potentially influence effort.

Overworking should not differ between individuals and dyads since there are no reputation concerns in our experiment. Hence, we form the null hypothesis H_0 as follows:

H_0 : Overworking will not differ between dyads and individuals.

Having teammates can influence overworking in two directions. On the one hand, it could decrease overworking due to the free-riding problem. When people work for earnings that they will share, they have an incentive to free ride, which will result in less working and less earning in the partner treatment than in the single treatment. Hence, we form hypothesis H_1 as follows:

H_1 : Overworking will be lower in dyads than in individuals due to free riding.

On the other hand, having a teammate can increase overworking for two reasons. First, overworking may be higher in dyads as opposed to individuals due to prosocial motives for the partner. If an individual feels responsible for the partner's earning, she might put in greater effort in cases in which the earnings are shared than in cases where the earnings are individual. If prosocial motives are the reason for greater overworking in dyads than in individuals, then overworking in the Partner treatment should be larger than in the Single and Image treatments. Hence, we form hypothesis H_2 as follows:

H2: Overworking will be higher in dyads than in individuals due to prosocial motives.

Second, overworking may be higher in dyads as opposed to single agents due to image concerns. Previous studies have documented that people work harder when their effort level is observed by others. As a result, more working and more earning will potentially be observed in dyads as opposed to individuals. If image concerns are the reason for greater overworking in dyads compared to individuals, then overworking in the Partner and Image treatments should be larger than in the Single treatment. Hence, we form hypothesis H3 as follows:

H3: Overworking will be higher in dyads than in individuals due to image concerns.

Results

Effort: Table 1 shows the mean average effort level for the Single, Partner, and Image treatments. The results suggest that people exert greater effort in the Partner and Image treatments than in the Single treatment. Wilcoxon rank-sum tests are used in order to check the significance of the differences in effort between treatments. Results show that the observed difference in effort between the Single and Partner treatments is significant at the 1% level in both Stage I ($p < 0.001$) and in Stage II ($p < 0.001$). Also, the observed difference in effort between the Single and Image treatments is significant at the 1% level in both Stage I ($p < 0.001$) and Stage II ($p < 0.001$). The differences in effort between the Partner and Image treatments are not significant either in Stage I ($p = 0.258$) or in Stage II ($p = 0.392$).

Table 1: Effort in slider task

	Single	Partner	Image
Stage I effort	18.60 (13.59)	29.39 (22.02)	34.12 (24.39)
Stage II effort	12.32 (20.33)	28.41 (28.52)	32.60 (30.63)

Notes: Standard deviations are in parentheses.

Actual consumption: A first look at the consumption data suggests that people consume similar amount of the items across treatments. People consumed an average of 2.79 ($SD = 1.92$), 2.96 ($SD = 2.09$), and 3.39 ($SD = 2.07$) items in the Single, Partner, and Image treatments respectively. Wilcoxon rank-sum test results show that consumption is indeed not significantly different between the Single and Partner treatments ($p = 0.788$), between the Single and Image treatments ($p = 0.152$), and between the Partner and Image treatments ($p = 0.178$).

Optimal consumption: The results from the treatments that measure optimal consumption are similar to the consumption results reported above. On average, people consumed 2.83 ($SD = 1.72$) items in the Cons treatment and 3.23 ($SD = 1.88$) items in the Cons_work treatment. Wilcoxon rank-sum test results show that consumption is not significantly different between the Cons and Cons_work treatments ($p = 0.225$). Moreover, consumption in the Cons and Cons_work treatments are not significantly different from consumption in the Single, Partner, and Image treatments.

Overworking: Figure 2 shows the average actual earnings and consumed earnings in the Single, Partner, and Image treatments. Earnings are calculated by multiplying the total effort (sum of effort in stages I and II) and wage (1 token per completed slider), and consumed earnings are calculated by multiplying the amount of consumed items and the price (5 tokens per item). Hence, overworking is the difference between total effort and consumed earnings.

Figure 2 shows a clear mismatch between earnings and consumption, which indicates that overearning is caused by overworking. Wilcoxon signed-rank tests confirm that earnings are significantly higher than consumed earnings at the 1% level ($p < 0.001$) in the Single, Partner, and Image treatments.

In order to investigate the difference in overworking across treatments, we run Wilcoxon rank-sum tests. The results suggest that overworking is significantly larger in the Partner treatment than in the Single treatment ($p < 0.001$) and it is larger in the Image treatment than in the Single treatment ($p < 0.001$). The difference in overworking between the Partner and Image treatments are not significant ($p = 0.232$).

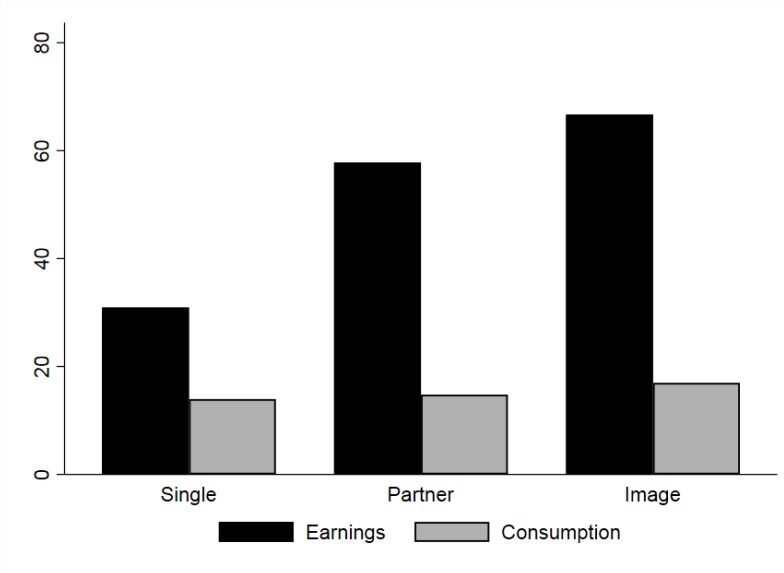


Figure 2: Average earnings and consumption

Moreover, once we investigate the differences in overworking based on the optimal consumption amount, we get a similar picture. When we use average consumption in the Cons treatment as the optimal consumption level, overworking is significantly larger in the Partner treatment than in the Single treatment ($p < 0.001$) and in the Image treatment than in Single ($p < 0.001$). The difference in overworking between the Partner and Image treatments is not significant ($p = 0.192$). Also, when we use average consumption in the Cons_work treatment as the optimal consumption, overworking is significantly larger in the Partner treatment than in Single ($p < 0.001$) and it is larger in Image than in the Single treatment ($p < 0.001$). The difference in overworking between the Partner and Image treatments are not significant ($p = 0.192$).

As Figure 2 shows, the differences in overworking across treatments is driven by the differences in total effort. The regressions presented in Table 2 investigate the determinants of total effort using OLS models. Model 1 investigates whether effort changes across treatments. The results suggest that, on average, in the Partner treatment subjects complete 27 sliders more than subjects in the Single treatment. Also, the Image treatment subjects complete, on average, 36 sliders more than the subjects in Single. Hence, subjects in both the Partner and Image treatments exert greater effort than subjects in the Single treatment. As shown in Model 2, these results hold when we control for consumption. Model 3 con-

trols for self-reported enjoyment from doing the slider task while listening to the annoying sound, and self-reported enjoyment from listening to music. Results suggest that as enjoyment from work increases, effort exerted increases, and as enjoyment from leisure increases, effort exerted decreases. Model 4 controls for additional factors such as gender, age, and subjects' SVO type. Results shows that women exert less effort than men. Moreover, subjects are classified into two SVO types –prosocial and individualist– and results suggest that individualists exert greater effort than prosocials.

Our results show that overworking is different between the individuals and dyads, so we reject hypothesis H0. Also, effort is higher in the Partner and Image treatments than in the Single treatment, even after controlling for several factors that influence effort provision. Hence we reject hypothesis H1, which expects larger overworking in the Single than in the Partner treatment. Moreover, we reject hypothesis H2, which expects larger overworking in the Partner than in the Single treatment due to prosocial motives. Our results support hypothesis H3, suggesting that subjects in our experiment overworked more in the dyad setting than in the individual setting due to image concerns.

Table 2: Determinants of total effort

	(1)	(2)	(3)	(4)
	Total effort	Total effort	Total effort	Total effort
partner	26.87*** (7.622)	25.82*** (7.324)	19.20*** (7.170)	18.33** (7.175)
image	35.79*** (8.726)	32.00*** (8.426)	29.40*** (8.099)	30.25*** (8.095)
consumption		6.285*** (1.485)	5.237*** (1.452)	4.519*** (1.482)
work enjoyment			4.582** (1.928)	4.831** (1.916)
leisure enjoyment			-4.357** (1.758)	-4.497** (1.766)
female				-10.34* (5.879)
age				-0.0120 (0.562)
SVO individualist				10.70* (5.843)
constant	30.92*** (6.141)	13.37* (7.209)	29.37** (13.39)	31.30 (21.10)
<i>N</i>	203	203	203	203

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

What else might have caused the result?

The experimenter demand effect

In the experiment, there are two stages where subjects make work and leisure decisions. In principle, having multiple opportunities to work should not influence subjects' effort decisions since they prefer leisure to work. Nevertheless, the additional stage that provides subjects

with an opportunity to work extra might have led them to work more due to the so-called experimenter demand effect. We replicate our analysis using only the effort in Stage 1 in order to examine whether a potential experimenter demand effect, which would result from facing multiple stages, causes overwork.

We define overworking as the difference between effort in Stage I and consumed earnings, and use Wilcoxon signed-rank tests to investigate whether effort in Stage I is significantly different from consumed earnings. Results suggest that effort in Stage I is significantly greater than the consumed earnings at the 5% level ($p = 0.018$) in the Single treatment and at the 1% level ($p < 0.001$) in the Partner and Image treatments.

Table 3 reports the OLS regression analysis in which the dependent variable is effort in Stage I. Results reported in Table 3 are qualitatively similar to the analysis where the dependent variable is total effort. People exert greater effort in the Partner and Image treatments than in the Single treatment. Hence, our results regarding the differences in overworking across treatments hold even when we only consider the effort in Stage I.

Table 3: Determinants of effort in Stage I

	(1)	(2)	(3)	(4)
	Effort	Effort	Effort	Effort
partner	10.78*** (3.556)	10.22*** (3.364)	7.786** (3.346)	7.229** (3.315)
image	15.51*** (4.071)	13.47*** (3.871)	12.67*** (3.780)	12.93*** (3.740)
consumption		3.391*** (0.682)	2.929*** (0.678)	2.514*** (0.685)
work enjoyment			2.427*** (0.900)	2.553*** (0.885)
leisure enjoyment			-0.911 (0.821)	-1.026 (0.816)
female				-5.210* (2.717)
age				-0.0987 (0.260)
SVO individualist				6.814** (2.700)
constant	18.60*** (2.865)	9.134*** (3.312)	9.914 (6.250)	12.81 (9.748)
<i>N</i>	203	203	203	203

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Uncertainty about consumption amount

A subject can potentially overwork if she cannot correctly estimate how many items she would like to eat. Yet, misprediction about own consumption cannot explain the treatment differences in overworking since we do not expect the misprediction to differ across treatments. Nevertheless, it could potentially explain why overworking exists in the Single treatment. In order to investigate this, we use subjects' estimate for the average amount of

items consumed in a different experimental session.⁷ Their estimates were incentivized as they could earn one euro if $c - 1 \leq \hat{c} \leq c + 1$, where c is the actual average consumption and \hat{c} is the estimated average consumption.

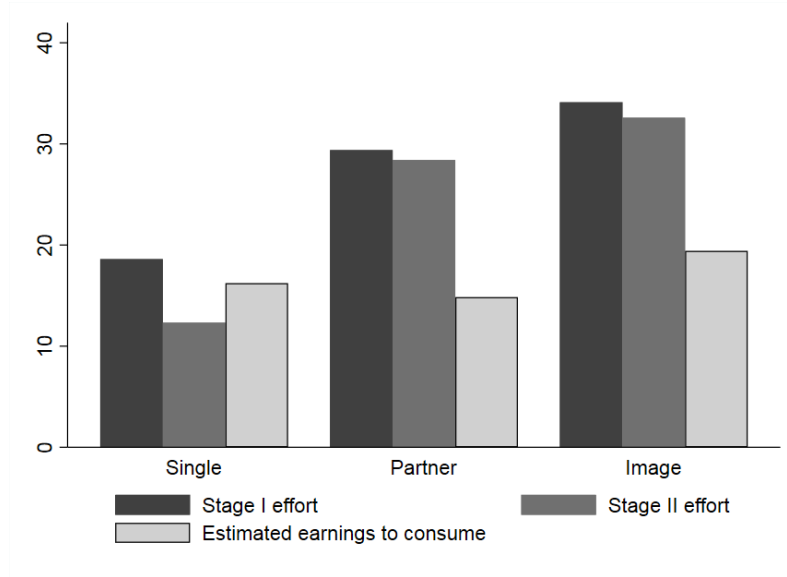


Figure 3: Effort and estimated consumption

Estimated average consumption is 3.25 ($SD = 1.85$), 2.97 ($SD = 1.07$) and 3.88 ($SD = 5.25$) items in the Single, Partner, and Image treatments respectively. Figure 3 shows the effort required to earn the estimated consumption ($\hat{c} \times 5$) and effort levels in stages I and II across treatments. We test whether total effort is significantly different from the effort required to earn the estimated consumption using Wilcoxon signed-rank tests and find that the former is significantly larger than the latter at the 1% level ($p < 0.001$) in the Single treatment, and at the 1% level ($p < 0.001$) in the Partner and Image treatments. Moreover, in order to take into consideration the potential experimenter demand effects resulting from having two stages, we test the differences between efforts in Stage I and $\hat{c} \times 5$ using Wilcoxon signed-rank tests, and find a non-significant difference ($p = 0.295$) in the Single treatment and a significant difference at the 1% level ($p < 0.001$) in the Partner and Image treatments. Hence, overworking in the Single treatment can be explained away by mispredicted consumption,

⁷Subjects' estimates for average consumption are elicited at the beginning of the questionnaire.

assuming there are experimenter demand effects resulting from multiple stages.⁸

Conclusion

In this study, we investigate whether people overwork in a setting where extra work does not always result in additional benefits. We expected that people who work in environments where earnings are shared and effort level is observed would overwork more compared to people who work individually. Our results confirm our expectations and this suggests that image concern is the prominent reason behind overworking in social environments.

The image concern explanation is robust to controlling for potential experimenter demand effects and to uncertainty about future consumption. Yet, overworking in an individual setting is explained away by the aforementioned factors. Hence, our results contradict those of HZCZ, and are in line with those of Riedel and Stüber (forthcoming) in rejecting overworking in individuals.

The results of this study are important for evaluating the policy tools that aim to increase productivity by non-monetary incentives. One of the common tools used by companies is to provide non-monetary recognition such as 'employee of the month' awards (Garr 2012). One way in which these awards aim to motivate employees is by using their image concerns. Our results imply that such tools should be used cautiously as they may lead to inefficient overwork and a resulting loss in productivity.

⁸In principle, a subject can also mispredict a partner's consumption, which could potentially result in more overworking in the Partner treatment than in the Image treatment, keeping the social image effect constant. Yet we do not observe this in our data.

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Appendix

A Instructions

A.1 Activity and consumption stage instructions

Welcome to our experiment!

During the experiment you are not allowed to use electronic devices or to communicate with other participants unless you are instructed otherwise by the experimenters. Please use only the programs and functions intended for the experiment. Please do not talk to the other participants. If you have a question, please raise your hand. We will then come to you and answer your question in silence. Please do not ask your questions out loud. If the question is relevant for all participants, we will repeat it loudly and answer it. If you violate these rules, we must exclude you from the experiment and the payout.

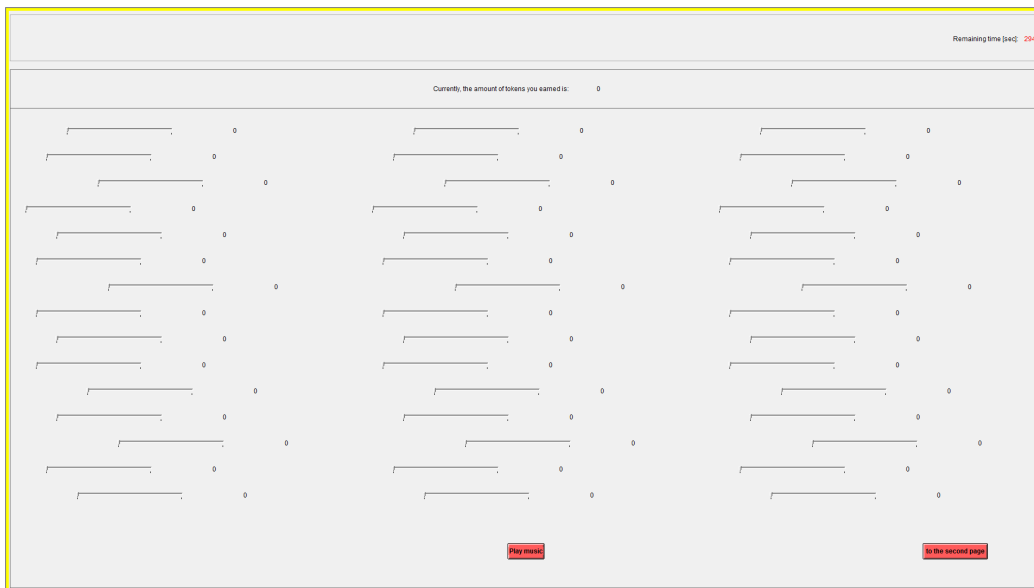
In this experiment, everybody will receive a show-up of €7. In addition, you may receive some additional money based on your choices and the choice of others during the experiment. At the end of the experiment, you will be paid your earnings in cash privately. There are multiple parts in this experiment, and in each part you may be asked to make one or more decisions. Decisions that are made in one part of the experiment cannot affect earnings in the other part of the experiment.

Please note that your identity will not be revealed to anyone during or after the experiment. Thus, your decisions will be anonymous.

Activity stage¹⁰

There are two types of activities you can do in the activity stage. You can either do the slider task and earn tokens, or listen to music and earn nothing. Activity stage lasts **5 minutes**, and you can choose to allocate your time to these activities in any way you like.

Once activity stage starts, you will face with the following screen:



The slider task provides a set of sliders on your screen. You can adjust each slider to any position between 0 and 100 by pressing the slider with your mouse and dragging it to the desired position. The number to the right of each slider

¹⁰In the Cons treatment where subjects only consume for 5 minutes, there is no activity stage. In the Cons_work treatment where subjects first worked and then consumed, they read the following instructions for the activity stage: You will be doing the slider task in the activity stage for 5 minutes. The slider task provides a set of sliders on your screen, as shown below. You can adjust each slider to any position between 0 and 100 by pressing the slider with your mouse and dragging it to the desired position. The number to the right of each slider tells you the current position of the slider. During the slider task, you will be hearing a noise from your headphones.

Your task is to drag as many sliders as you can to the position of 50. If you finish dragging the sliders on this page, you can continue to the second page to drag more sliders by pressing 'to the second page' button on the bottom right corner of the screen. You are required to work on the slider task and drag as many sliders as you can to the position of 50 in order to get your show-up fee.

tells you the current position of the slider. You earn 1 token for each slider you drag to the position of 50. You can see how many tokens you earned on top of the screen. If you finish dragging the sliders on this page, you can continue to the second page to drag more sliders by pressing 'to the second page' button on the bottom right corner of the screen. During the slider task, you will be hearing a noise from your headphones.

If you would like to spend some of your time by listening to the music, you can press the 'Play music' button on the bottom of the screen. Please note that you cannot do the slider task and listen to the music at the same time. You can go back to the slider task at any time you want when you are listening to the music, and vice versa.

Single treatment

At the end of the experiment, you can buy snacks and drinks with the tokens you earn. Note that you have to consume the items you buy in the laboratory. You cannot take any items with you outside the laboratory. You will have **5 minutes** to consume these items. All participants will be asked to remain seated for the complete duration of time (5 minutes) provided to consume the goods.

At the end of the experiment, you can buy snacks and drinks with the tokens you earn. Note that you have to consume the items you buy in the laboratory. You cannot take any items with you outside the laboratory. You will have **5 minutes** to consume these items. All participants will be asked to remain seated for the complete duration of time (5 minutes) provided to consume the goods.

Partner treatment

In this part, you are randomly matched with another person in this room. The tokens earned by you and earned by the person you are matched with will be summed up, and each of you will get half of that sum. The identity of your partner will be anonymous.

At the end of the experiment, you and the person you are matched with can buy snacks and drinks with these tokens. Each of you will decide on what to buy separately, and will consume the bought items in private. Note that the bought items have to be consumed in the laboratory. The items cannot be taken outside the laboratory. Everybody will have **5 minutes** to consume these items. All participants will be asked to remain seated for the complete duration of time (5 minutes) provided to consume the goods.

Image treatment

In this part, you are randomly matched with another person in this room. The amount of tokens earned by you and earned by the person you are matched with will be shown to each other. The identity of your partner will be anonymous.

At the end of the experiment, you and the person you are matched with can buy snacks and drinks with the tokens earned. Everybody will consume his or her own earnings. Each of you will decide on what to buy separately, and will consume the bought items in private. Note that the bought items have to be consumed in the laboratory. The items cannot be taken outside the laboratory. Everybody will have **5 minutes** to consume these items. All participants will be asked to remain seated for the complete duration of time (5 minutes) provided to consume the goods.

Same for all the treatments

The menu of items you can choose from is the following:



dry pork sausage



banana



hanuta



Kinder country




Orange juice
(0.20l)

Each item costs 5 tokens. Once the activity stage ends, you will be asked to fill out a shopping card and indicate the items you would like to buy with the tokens you earned.¹¹

The experimenters will provide you with a sheet in which you can indicate the items you would like to get. You can have multiple unit of each item, see the shopping cart below.¹²

¹¹ In Cons and Cons_work treatments, this paragraph is as follows: Once the activity stage ends, you will be asked to fill out a shopping card and indicate the items you would like to get.

¹² In Cons and Cons_work treatments, shopping card does not include cost and total cost columns.

Item	Cost per item	Amount you would like to buy	Total cost
 banana	5 tokens		
 BiFi	5 tokens		
 hanuta	5 tokens		
 Kinder country	5 tokens		
 Orange juice	5 tokens		

We will further ask you to leave any unconsumed items and the packages/leftovers of the consumed (or partially consumed) items on your desk. We ask this in order to verify that all food items given to you, were either consumed (or not) here, and not taken outside of the lab. One of the experimenters will collect these items at the end of the consumption stage.

Now, please put on your headphones and press the START button on your screen. The experiment will start once everybody presses START.

A.2 Shopping Card

ID number:



Shopping card

Please indicate the items you would like to buy from the list below. If you would like to buy more than one of an item, please indicate how many you would like to buy. Once you finish filling in, please raise your hand. One of the experimenters will bring the items you requested.

You have 5 minutes to consume the items you buy. Please leave any unconsumed items and the packages/leftovers of the consumed items on your desk. One of the experimenters will collect these items at the end of the consumption stage.

Item	Cost per item	Amount you would like to buy	Total cost
 banana	5 tokens		
 BiFi	5 tokens		
 hanuta	5 tokens		
 Kinder country	5 tokens		
 Orange juice	5 tokens		

A.3 SVO Instructions

Allocation stage

In this stage, you have been randomly matched with two different persons, say **person A** and **person B**. These persons will remain mutually anonymous.

You will complete six allocation tasks where you will allocate **points** between you and person A. Moreover, person B will complete the same set of allocation tasks where person B will allocate points between him/herself and you. An allocation task will look like the following:

For each of the following questions, please indicate the distribution you prefer most by marking the respective position along the midline.

1 of 6

You receive	85	85	85	85	85	85	85	85	85
Other receives	85	76	68	59	50	41	33	24	15

You receive 0
Other receives 0

OK

On the screen, person A is referred as the **other** person. For each of the allocation tasks, please click on the distribution you prefer most. You can only make one click for each task. After you make your decision, please click on your preferred distribution and press OK button.

Each point has a value of 5 cents. So, your decisions will yield money for both yourself and person A. At the end of the experiment, one of the allocation tasks will be randomly chosen, and you and person A will be paid based on your allocation decision for the chosen task.

Similarly, one of the allocation tasks that person B has completed will be randomly chosen, and person B and you will be paid based on person B's

allocation decision for the chosen task. So, your earnings will be determined by both the decisions you make, and the decisions person B makes.

Now, please press the START button on your screen. Allocation stage will start once everybody presses START.

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