

*The following is a writing sample comprised of three separate research proposals.*

## Deception in Desperate Circumstances

### I Background

In 2017, the World Bank estimated that more than 689 million people were living in extreme poverty across the world, surviving on less than USD 1.90 per day (Lakner et al., 2021). With billions being spent each year to combat poverty, understanding the effects of aid programs and the responding behaviors of those afflicted by poverty is of vital importance. Because developing economies are frequently host to large informal sectors for commerce, many poverty alleviation programs in those countries are unable to rely on reported income to target the country's poorest citizens for aid. Instead, a popular alternative in the developing world is the use of proxy means tests, in which a set of individual and household characteristics (proxies) is used to predict the value of potential aid for each household.

As early as 2009, evidence from field studies of social welfare programs using proxy means tests for targeting has suggested that potential aid recipients have engaged in deceptive practices to qualify for aid (Martinelli & Parker, 2009), and recent research has continued to shed light on the potential for misreporting in similar programs (Banerjee et al., 2018). Unfortunately, this work in the field has proven inconclusive regarding the circumstances necessary to produce deception while targeting aid for the poor. I aim to address this uncertainty by identifying potential factors that may affect the likelihood of an agent misreporting information, conducting a lab experiment to test the effect of the hypothesized influencers, and quantifying the effect size of each component.

Proxy means tests can rely on information about consumption, household composition, disability status, employment, and numerous other possible signals of (relative) wealth or need for assistance. Much of the existing literature regarding deception in social program manipulation using proxy means testing focuses on the use of consumption (in particular, of luxury goods) as a proxy for income. Martinelli and Parker (2009) provide evidence of widespread underreporting of goods that could suggest wealth and financial security. Notably, they also find evidence that underreporting persists even when the surveyors are known to be capable of checking the information reported (Martinelli & Parker, 2009). The results found by Martinelli and Parker (2009) are bolstered by Banerjee et al. (2018), who show a similar proclivity for underreporting luxury items (in this study, flat screen TVs). Banerjee et al. (2018) also offer evidence that potential aid recipients continue misreporting even when their reports will not impact their level of assistance.

A growing experimental literature investigates the effect of loss aversion on lying behavior. The theory of loss aversion, introduced by Kahneman and Tversky (1979), asserts, in principle, that "losses loom larger than gains" (279). Consequently, economic agents experiencing losses or faced with the prospect of loss may be more likely to engage in an act of despartion to avoid or remedy the loss than those faced with an equivalent opportunity for gain. In a lab experiment conducted by Garbarino et al. (2019), participants who had a low probability of receiving a bad outcome (small payoff) and a high probability of receiving a good outcome were more likely to engage in deception than those who had a high probability of the bad

outcome. These results indicate that the potential for losses relative to an expected reference point has a positive effect on the likelihood of lying. Furthermore, emerging evidence from the field aligns with these experimental results.

While I have been unable to find existing research in which experimenters have induced desperation in a lab setting, experimental evidence suggests that the poor face cognitive limitations due to the stress and attention required to manage living in poverty (Shah et al., 2012). In a work investigating the role of social norms in mitigating cheating behaviors, Boonmanunt et al. (2020) show that social norms are ineffective at preventing cheating among the poor and attribute this outcome to the limitations on cognitive resources imposed by the state of poverty. Boonmanunt et al. (2020) also show that poverty alone did not cause any changes in cheating behavior among experimental subjects. As a result, I plan to use stress as a cognitively inhibiting treatment, but I will not pursue simulating poverty and desperation in the experiment.

## **II Method**

To assess the possible contributors to lying behavior as an instrument for social welfare program manipulation, I will conduct an experiment in using undergraduate students as subjects. I will focus on no more than four possible factors in the decision to misreport information for the purposes of increasing overall payoff. Based on the literature I have currently reviewed, I plan to investigate loss aversion, stress and cognitive impairment, the ability for surveyors to verify reported information, and the informed lack of impact of reported information on realized outcome.

I will use the procedures for observed and unobserved cheating games used in Gneezy et al. (2018), in which participants observed a random outcome and then reported (or falsely reported) their observation to an experimenter, as the starting point for my experimental design. While Gneezy et al. (2018) separate their study into two distinct games (observed and unobserved), it will be necessary to have a unified game design that allows for observation in order to make sound comparisons between participants whose reports can be verified and those whose cannot.

## **III Conclusion**

This research will help expand upon and explain results found in existing field work that has suggested a broad tendency for lying among potential aid recipients by investigating some of the components of surveys and social welfare programs that could encourage deception. While it would not be achievable to realistically simulate the experience of extreme poverty (and furthermore, to validate a procedure), we can emulate some of the decision-making conditions that those in poverty face on a daily basis.

The results of this project can help policymakers design aid programs and researchers study the effectiveness of those programs. Without being aware that these behavioral tendencies exist and the frequency with which they appear, researchers studying at-scale programs may misattribute patterns in the data or be unable to identify their influence on the apparent effects of the programs they seek to evaluate.

# Identifying willingness to forgo leisure to supplement insufficient income

## I Background

Under the traditional view of the tradeoff of labor and leisure, economic agents generally prefer leisure to labor and will substitute leisure for labor whenever they can afford to do so. Across the world, both government agencies and private organizations distribute monetary assistance to the poor in an effort to relieve the burden of poverty. In developing economies, targeted aid is frequently given to those in the most need. In the United States, the idea of a universal basic income (UBI) has grown dramatically in popularity in the past several years, and unemployment assistance has become a topic of debate in the wake of extensions due to the COVID-19 pandemic. In light of the prevalence of social welfare programs that provide income without requiring labor in return, the question of how representative the traditional view of the labor-leisure tradeoff is of actual human behavior remains. Does guaranteed income always reduce labor supply, or are there situations in which guaranteed income can have no effect on or even increase labor?

In particular, I am interested in researching the impact of insufficient guaranteed income on agents' willingness to provide labor. Especially in the case of emergency aid for the poor in developing economies, cash transfers are not always sufficient to sustain life, support a family, or provide financial security. When this is the case, can we still expect beneficiaries to choose leisure over labor? Conversely, could insufficient guaranteed income prompt increased labor by (a) making the combined income from labor and the guarantee sufficient for meaningful gains, (b) providing access to better resources and nutrition, and (c) reducing the stresses (and thereby the cognitive limitations) caused by living in poverty?

The existing literature regarding the effects of guaranteed income on labor supply among the world's poorest citizens is limited (Baird et al., 2018), but much of the existing research indicates that unconditional cash transfers to the poor do not have a substantial effect on labor supply (Arnold et al., 2011; Lehmann & Masterson, 2014). Lehmann and Masterson (2014) and Ozler et al. (2020) show that such cash transfers can reduce labor supply; however, the recipients of these unconditional cash transfers live in countries with substantial informal commercial sectors in which dangerous and exploitative work is also not uncommon. Consequently, as noted by Lehmann and Masterson (2014), the demonstrated (albeit notably not substantial in the case of Lehmann and Masterson (2014)) reduction in labor supply could be explained by aid recipients leaving dangerous and exploitative work.

## II Method

In the absence of the ability to conduct an experiment in the field or reliably separate program beneficiaries leaving exploitative work from leaving safe, secure work, I plan to use a lab experiment to isolate the effect of different income sizes on willingness to work for money. Thus far, I have been unable to find much prior experimental work investigating the labor-leisure tradeoff. However, the peg-turning activity used in Festinger and Carlsmith's (1959) seminal cognitive dissonance study has proven unpleasant for participants and can serve as a simulation of a labor task that most would consider less enjoyable than leisure. In addition to the basic labor task, Corgnet et al. (2015) emphasize the relevance of "on-the-

job leisure” to job performance and interest in doing work. As a result, some participants should be given the ability to engage in leisure activities during their work period (subject to minimum labor requirements).

In the lab, it is impossible to simulate the experience of needing to work and collect income consistently in order to survive. For this reason, and because ”sufficient” income is dependent on numerous household and beneficiary characteristics, I will set an arbitrary threshold for earnings below which they are worth only a fraction of their nominal value. In this way, I can create three possible treatments: no guaranteed income (control), insufficient income (below the threshold), and sufficient income (at or above the threshold). Subjects will then be able to earn additional income through the peg-turning activity referenced above.

### III Conclusion

This experiment would not be undertaken in the field or over a long enough period of time to examine the influence of repeated interactions with an employer and long-term goals and savings on the choice between labor and leisure. Furthermore, I would be unable to see the results of labor market impacts on other potential employees (for example, beneficiaries suddenly leaving their jobs could make it easier for others to get work and increase offered wages). While these are limitations of this project, they also help isolate the effect of income guarantees on labor supply. If, for example, this experiment were to show no effect of guaranteed income on labor supply, we might hypothesize that the influence of other factors is partially responsible for effects observed in the real world. Finally, this research question necessitates that participants believe they will actually receive their earnings, so conducting this experiment would either require an unethical level of deception or more financial resources than may be available.

I expect to find that—consistent with traditional theory—no guaranteed income does not induce any leisure activities, and guaranteed sufficient income produces the most leisure. However, I expect guaranteed insufficient income to result in some labor but a decreased level compared to no guaranteed income. Accounting for the lack of repeated interactions and the inability to observe efforts to avoid getting fired, it would seem reasonable that even a slightly decreased level of labor is indicative of labor supply being largely unaffected by the income guarantee.

The results of this experiment can shed light on the effect of the size of income guarantees on the reduction in willingness to work for pay. These findings can then help policymakers develop assistance programs and assess the potential impact of those programs on the market for labor. Extensions of this research can include at-scale field research focused on guaranteed income size, and observational studies of comparable unconditional cash transfer programs.

## Willingness to engage in unethical behaviors when others do so as well

### I Background

Recent research has demonstrated an effect of social interactions and proximity to others' actions on behavior. While behavior is commonly dictated by social norms and personal standards of morality, a question vital to understanding the influence of social interactions on behavior is whether such interactions can overcome internalized norms of ethical behavior. In particular, can the social influence of peers cause someone to behave unethically, even when they know they aren't being observed by those peers? One specific example of this kind of behavior that has been the subject of prior research is academic cheating and dishonesty (Carrell et al., 2008; Griebeler, 2019). This phenomenon could apply to a broader array of situations, and it could occur in such a way that it has an adverse effect (possibly unbeknownst to the agent) on others.

From the case of academic dishonesty to tax evasion—or lack thereof (Alm et al., 2017)—lying to qualify for aid ahead of others, and engaging in unethical business practices, individuals regularly make decisions that can simultaneously negatively impact others and yet seem not to affect anyone else. In the absence of peer effects, such actions may be uncommon. When it's common knowledge that peers are engaged in the same unethical behaviors, though, it seems likely that the perceived ethical boundaries will shift.

There is a growing economic literature regarding peer effects, relying on both experimental methods and observational data, and there is a wealth of prior psychological research on social conformity. Asch (1956) famously presented convincing evidence that people are prone to conforming to a norm set by peers around them. Admittedly, Friend et al. (1990) argues that Asch's (1956) results have been misinterpreted in such a way that exaggerates the presence of conformity, so a more thorough review of the literature on peer effects and conformity may reveal more instances of independence.

Griebeler (2019), Carrell et al. (2008), and Pascual-Ezama et al. (2015) all discuss the influence of peer effects on academic cheating. Griebeler (2019) produces a model of for predicting peer effects on cheating supporting the notion that an individual who knows about or sees their peers cheating will be more likely to cheat themselves. Carrell et al. (2008) and Pascual-Ezama et al. (2015) offer evidence in favor of Griebeler's (2019) model, showing that cheating among peers causes an increase in the probability of an individual cheating in both an experimental (Pascual-Ezama et al.) and observational (Carrell et al.) setting.

### II Method

To investigate the effect of peer lying on individual lying decisions, I will conduct an experiment using undergraduate students as subjects. The game will be a modified version of the one played in the study by Gneezy et al. (2018), in which participants observe a random number that affects their payoff and must self-report that number. In this experiment, participants will be randomly assigned to view either false prior results from the experiment or nothing at all (control) before playing the game. There are three possible treatment arms

aside from the control: subjects view prior results suggesting that lying is common, lying is uncommon, or lying is as common as not lying.

It is also important to note that Gneezy et al. (2018) have separate games for the experimenters being able and unable to directly observe whether subjects lie. In this experiment, participants must feel comfortable that their decisions cannot be observed by the experimenters or their fellow subjects. Consequently, I can either design the experiment so that I can secretly directly observe whether participants lie or not, or I can make the decision-making truly private and compare the reported distribution of numbers to the theoretical expected distribution. Additionally, it must be clear in the instructions given to participants that they will not be identified or used in the false statistics shown to future players.

### III Conclusion

Based on the results of previous studies, I expect to find evidence of peer effects on lying behavior, even in isolated situations. As an extension or possible addition to this experiment, only the participants with the highest numbers (for example, the five highest numbers) could receive payouts. In this version of the experiment, participants are faced with a more complex decision: loss aversion, competition, and willingness to potentially harm other players become factors. Due to the added complexity, this addition would likely need to be played separately from the original and compared to the results from the basic game.

This research will expand upon existing work evaluating peer effects and their causes. In this case, the experimental design of decision-making in isolation removes the influence of social conformity and instead ensures that participants make their decisions purely based on the knowledge of how previous participants have behaved and their own evaluation. Dahl et al. (2014) argue that two possible causes of peer effects are information about potential consequences and the snowball effect. As there will not be any formal consequences for lying in this experiment, and participants will not know each others' decisions, any observed peer effects will not be the result of gaining information about potential consequences of lying. Furthermore, each participant's decision does not contribute to the peer behavior observed by other subjects, so the snowball effect will not affect the size of the peer effects.

There are numerous situations for which this research has economic implications. Notably, individuals' willingness to behave unethically when peers behave similarly can impact commercial markets (for example, in the case of intellectual property and piracy) and result in broad indirect consequences for pricing, production, and innovation.

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