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A qualitative study of perception of a dishonesty experiment

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ABSTRACT

We conducted focus groups with participants of a laboratory experiment on cheating with the aim to describe and structure participants' lived experience with the experiment and to compare their perceptions with experimenters' expectations. Our results suggest that participants often perceive both control and experimental conditions differently than intended by an experimenter. For example, the participants' decisions may be affected by feeling that they have to make a choice and do not have the opportunity to leave the experimental situation; by not believing in the anonymity of the experiment, by misunderstanding of random processes, or by other considerations other than the ethicality, for example by how entertaining or effortful is the chosen course of action. Our results underscore how difficult it is to achieve internal validity even in laboratory research. We conclude that the laboratory research of dishonesty would be improved by taking into account different perceived frames of experimental designs.

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Introduction

Dishonest and fraudulent behavior leads to significant losses for individuals, organizations and society (Biron, 2010; Cialdini et al., 2004; Enserink, 2011; Marcus & Schuler, 2004; Rhodes, 2016; Vranka et al., 2019). Highly publicized examples of dishonest behavior include the Enron accounting scandal, Volkswagen's 'Dieselgate,' or the Theranos investment scandal. All of these cases created not only direct losses for shareholders, employees, and taxpayers, but also indirect losses through a decline of confidence in the integrity of businesses and government agencies (Carson, 2003). As solving pressing issues in society should be one of the main tasks of science (Watts, 2017), there is a strong need for research in what causal factors affect dishonesty and deception, and what measures can effectively reduce them. Many authors therefore call for more replicable experimental research exploring theoretical underpinnings of dishonest behavior from economic, psychological and philosophical perspectives (Bazerman & Gino, 2012; Houdek, 2019a), as well as their application in the fields of business or policy-making (Anderson & Edwards, 2015; Margetts, 2011; Perry, 2012; Prochazka et al., 2021), and especially in the area of ethical decision-making (Bazerman & Gino, 2012; Haidt & Trevino, 2017).

In general, the controlled environment of laboratory experiments allows the identification of the causes of human behavior (Falk & Heckman, 2009; Gill, 1982). In the case of dishonest behavior, laboratory experiments may provide researchers with direct information on causal factors in ethically challenging situations in which it is difficult for people to participate in natural settings (Anderson & Edwards, 2015; Zhang et al., 2014). The controlled nature of the experimental environment allows the simulation of situations like corruption, deception or fraud and the manipulation of

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many variables that could possibly influence them such as deceptive motives (Levine et al., 2010), a probability of being caught (Gamliel & Peer, 2013), self-reflection (Gino & Mogilner, 2014), the perception of wealth (Gino & Pierce, 2009), the detection of opportunity (Mazar et al., 2008), or the personalization of a message (Cappelen et al., 2013). However, despite their unquestionable advantages, laboratory experiments have their own limitations such as the artificiality of the experimental setting (Jimenez-Buedo & Guala, 2015), demand characteristics (Orne, 1996) or problem of external validity (Falk & Heckman, 2009; Guala & Mittone, 2005). Especially in the case of laboratory studies on dishonesty, it is also important to assure that participants understand the task and decisions they make as intended by researchers. Although participants may misunderstand and misconstrue virtually any experimental situation, the expected magnitude of the problem differs between experimental designs. For example when studying auctions (e.g. Kagel & Levin, 1993), the goals and possible actions are relatively straightforward and can be described unambiguously and explicitly to participants, together with externally given valuations of auctioned goods and other information necessary for making decisions. However, when studying dishonesty, subjectively perceived internal costs of immoral behavior (Mazar et al., 2008) are much more variable, as perceptions and construals of the experimental situation can be affected even by minor changes in the experimental settings (Vranka & Bahník, 2018).

Although currently underutilized by researchers in economics (Lenger, 2019), qualitative and interpretive research can bring important insights into how people experience lying, cheating and deception in an artificial laboratory setting and what otherwise overlooked factors might influence their behavior besides the factors studied by researchers (Alison et al., 2001; Bryant, 2008). This paper aims to show how a qualitative methodology approach can be advantageous in adjusting experimental design to improve validity (Simon, 1992). We suggest that researchers should focus more closely on participants' sense-making of the experimental situation, especially when it allows for a wider range of possible interpretations. Qualitative methods can be used as a tool for exploring participants' individual perception of observed phenomena and discovered insights can serve for generation of new operationalizations, even hypotheses, and formulation of more convincing experimental designs (Lenger, 2019). The main goal of the present paper is therefore to demonstrate the applicability and potential benefits of qualitative approach to study of participants' experiences with an experiment in which they had a chance to behave dishonestly and identify factors influencing their perception of the laboratory task.

Validity of experimental research of dishonesty

Organizational and policy sciences lag behind other social sciences with respect to the regular use of laboratory research (Anderson & Edwards, 2015). The main reason for the relatively lower popularity of laboratory experiments probably lies in their ambiguous external validity and generalizability (Greenberg & Tomlinson, 2004). These issues may lead to experimental findings not being seen capable of providing reliable information about people's behavior in a real setting, which limits their usability for policy-making. Recommendations on how to reduce dishonesty based on laboratory findings (Bazerman & Sezer, 2016; Moore & Gino, 2015; Zhang et al., 2014) may not work in practice (Houdek, 2019a, 2019b; Koning et al., 2020; Schild et al., 2019). The most discussed reason is that laboratory studies of dishonesty are often conducted on WEIRD¹ or student samples (Cheek, 2017; Henrich et al., 2010), which differ from the general public in many important ways (Peterson & Merunka, 2014).

Above all, in order to study a phenomenon in the laboratory, experimenters model it by a simple artificial task. Because the task could never be as complex or structured exactly as the phenomenon under investigation (Jimenez-Buedo & Guala, 2015), the participants may interpret this usually context-free simplified situation and their decisions within it in multiple different ways. In some cases, the participants' perceptions of an experimental task might starkly differ from the interpretation intended by researchers (Levitt & List, 2007). This may cause, among other issues, that

people's behavior in the laboratory will be governed by different factors than were supposed to be modeled and studied. Because of this, it is usually difficult to ascertain whether an observed behavior in a laboratory study is a result of intended experimental manipulation or of an effort to satisfy or subvert the experimenter's expectations that are perceived differently in different experimental (or control) conditions. Instead of measuring the participants' choice or preferences, the data might be biased by a perceived but unobservable norm of conduct. People may desire to do 'the right thing' (Smith & Renfro, 2019) or want to make a choice of which the majority or the authority would approve in the novel context of an experiment, although in a real situation, supposedly modelled by the experiment, their preferences would be influenced by other factors based on subjective interpretation of individuals' experience and understood context (Halevy et al., 2019; Levitt & List, 2007). For example, a study by Mazar et al. (2008) used a religious reminder to lower dishonest behavior. However, it is not clear whether participants behaved more honestly in the experimental condition because of the reminder, or because in the experimental condition they were more likely to correctly guess experimenters' intentions and comply with them (Skowronek, 2020). Alternatively, if due to the presence of the reminder subjects felt more observed in the experimental condition, they could be more likely to act honestly because of social norms (Hicks, 1970). Although experimenters are aware of this problem and try to ensure the anonymity of participants, it turns out that participants do not always trust them (Franzen & Pointner, 2012). In general, every manipulation that affects the perception of an experimental situation in a systematic way can be seen as a threat to internal validity, as it makes it impossible to identify the real causal factor behind the observed behavior.

Furthermore, we suggest that the variability in perceptions of laboratory tasks by participants endanger not only the internal but also the external validity of experiments. Although some studies show a correlation between laboratory cheating with diverse unethical real-word behaviors (e.g. Dai et al., 2017; Potters & Stoop, 2016), an increasing stream of literature demonstrates that people behave differently in the laboratory and in the field and in different tasks used by researchers to study moral or dishonest behavior (Gerlach et al., 2019; Jacobsen et al., 2018; Rosenbaum et al., 2014). As a consequence, people may seem to express preferences that do not match their real-life preferences. For example, participants who, despite having ample opportunities, had never before contributed to any charity gave 60% of their endowments to a charity in a laboratory experiment (Benz & Meier, 2008). Or, despite the fact that most people do not physically harm themselves immediately after being bored for a few minutes, 67% of men self-administer an electric shock during the 15 min when they should entertain themselves with their thoughts in a study by Wilson et al. (2014). Similarly, in real life, people do not resort to outward fraud if they are explicitly monitored and their behavior visibly recorded, unlike in some laboratory experiments on cheating (Gross et al., 2018).

Authors of laboratory studies are aware of these problems of generalizability and threats to internal validity such as experimenter's expectations (Hicks, 1970), evaluation apprehension (Cottrell et al., 1968) and especially demand characteristics (Orne, 1996). There are many ways to deal with demand characteristics in experiments, like large stakes or rewards for participants, obscuring the meaning of the experiment, adding irrelevant 'filler' tasks, measurement of the influence of demand characteristics (Dai et al., 2017; de Quidt et al., 2018; Rubin, 2016) or minimizing contact between the researcher and the participant (Rubin & Badea, 2010). However, there are other aspects of demand characteristics that are not linked to the experimenter's presence, such as the way people perceive the situation of the experiment itself. Post-experimental questionnaires may not reflect the true beliefs or preferences of participants because of the very same demand characteristics, a lack of motivation, or cognitive depletion when an experiment is perceived by participants as too long, demanding, or boring. That is why we set up a stand-alone follow-up qualitative study in which the participants of a laboratory experiment had an opportunity to talk about their perception of the experimental situation. Our aim was to answer the following research questions:

1. How do participants experience participation in an experiment in which they have the possibility to cheat for monetary gain?
2. How do the participants in the experiment perceive the difference between the experimental and similar naturally occurring situations?
3. How do they feel this potential difference in experiencing the situations may manifest in their actual behaviors?

Methods

To investigate the research questions we conducted four focus group sessions with 20 participants (10 women and 10 men, mainly Czech university students, 20–29 years old [$M_{\text{age}}=24.3$, $SD_{\text{age}}=2.14$], median number of past participations = 2) who previously took part in a laboratory experiment on cheating (Study 1 in Houdek et al., 2021). Each session took about an hour. All participants in the original experiment received an email invitation to participate in a follow-up study described neutrally as a ‘group discussion about the experiment in which you have participated’. To ensure equal representation, we reserved three places for men and three for women in each of four group sessions. After the four sessions, we ended data collection as participants started to produce repetitive information suggesting that we achieved theoretical saturation (Krueger, 2014).

Each participant was rewarded with 500 CZK (approx. 24 USD) for their participation in the group discussion that took about one hour. The reward for participation was approximately 1.7 times higher than is usual in our laboratory. Because the invitations were sent in a random order and all places were filled immediately, we assume that no specific subset of participants in the original experiment self-selected for the focus group discussions.

We decided to use the focus group methodology because a discussion in a group of people can help participants to talk about misbehavior such as cheating and lying as less inhibited members may break the ice or provide mutual support (Robinson, 1999). In comparison to an individual interview, participants may also be more willing to talk about their perceptions of the experimental situation that supposedly differ from the researchers’ intentions. Others may also open interesting topics and encourage others to share under the influence of group dynamics. Indeed, that demand effect can be present in focus group methodology as well. However, the focus group outline has been designed to avoid formulation indicating the interests or expectations of the interviewer which should minimize potential demand effect (Grimm, 2010). Furthermore, group dynamics can help in focusing on the most important topics and make it easier to assess the extent to which there is a consistent and shared view.

The laboratory experiment on cheating

Although people often have the opportunity to choose their environments outside of the laboratory, only very little laboratory research exists on the effects of self-selection on dishonest behavior. To fill this research gap, the computer-based experiment discussed with its participants focused on the effect of self-selecting into a cheating-allowing environment on the rate of subsequent cheating (Houdek et al., 2021). The experiment lasted about 1.5 h and participants could earn an average of 300 CZK (approx. 13 USD) if they did not cheat and up to 500 CZK (approx. 22 USD) if they cheated.

Participants played a version of the mind game (Jiang, 2013), which belongs to the population inferred cheating tasks or so-called die-under-cup paradigms, in which participants have an incentive to be dishonest without any chance of getting caught because dishonest behavior can only be identified at an aggregate level (Jacobsen et al., 2018). This paradigm is broadly used in economic laboratory and artefactual field experiments (e.g. Abeler et al., 2014; Gerlach et al., 2019; Houser et al., 2012; Mol et al., 2020; Pascual-Ezama et al., 2015). Simultaneously, behavior in this task is considered

to have high external validity, as fraudulent behavior in a laboratory correlates with real-world cheating (e.g. Dai et al., 2017; Hanna & Wang, 2017).

In the task, participants gained money when they correctly predicted whether the outcome of a fair die roll – that is, a random number generator – would be odd or even. There were two versions of the game. In the first version, cheating was not possible – participants stated their predictions before the die was rolled, and then they saw the outcome and reward. In the second version, participants were asked to make a prediction only in their mind and remember it. Then a die was rolled by computer and participants were shown the outcome and then asked to state whether they had predicted it correctly or not. As the actual prediction was only in the participants' minds, they could cheat and misreport their incorrect predictions as correct; it was impossible to prove whether a participant cheated or not.

After playing both versions of the game (10 rolls each) in a random order, half of the participants were randomly assigned one of the versions for the third round of 10 rolls. The rest of the participants could choose what versions of the game they wanted to play. By this manipulation, the study tested the hypothesis that cheaters who self-select themselves into environments that allow cheating will be cheating more than those assigned to the same version of the task at random. In the end, they could donate part of the reward obtained in the experiment to a charity (their decision was used as an indicator of social preferences; Charness & Rabin, 2002).

Before participating in the experiment, the participants signed an informed consent, which informed them that their participation is fully voluntary, that they could terminate it at any time, that all the information they receive is completely truthful, and that their data will be anonymized, thus making it impossible to associate their responses with them. A research assistant introduced the participants to the room, read the instructions, and then stayed in the room in case anyone would experience some technical difficulties or need assistance. To ensure privacy and limit any possible demand effect, the research assistant was positioned in the room in a way that did not allow her/him to observe participants' behavior in the experiment. Research assistants in the experiment were not aware of the following qualitative investigation.

Answers to open-ended questions in a debriefing questionnaire suggested that some participants did not think that cheating in the task and in the real world are the same. The cheating in the experiment was perceived by some participants as expected, encouraged, or without moral relevance, because it is '*just an experiment*', and the dishonesty harms no one nor honesty benefits anyone. Based on those statements we wanted to more deeply explore perception of dishonest behavior in the experimental settings.

Focus group procedure

The participants of each focus group were supplied with an informational sheet which explained the aims of the study, and signed consent that informed them that they could terminate participation at any time, that they were not about to be deceived, that they will be recorded and the anonymized recordings will be used for analysis. Each of four sessions consisted of five participants, lasted for about one hour and was audio-recorded to ensure data accuracy. The focus group discussion was semi-structured because of the possibility to adapt questions based on the content of previous statements. Questions were open-ended to allow flexibility and get richer narratives. A fixed reward of 500 CZK (approx. 22 USD) was given to all participants.

The discussion was led by the first author of this study. The lead author did not participate in the original study in any way and did not even know its results, so there was no conscious or unconscious distortion of questioning. The first part of the discussions mapped the participants' experience of the experiment and how they perceived the opportunity to cheat. The second part focused on what factors played a role in the decision to choose the environment that allowed or prohibited cheating, and then on cheating behavior itself. Then we focused on experiences with cheating and selecting cheating-allowing situations in daily life in comparison with experiences in the

experiment. In the last part, the participants were presented with cards describing demand characteristics (for example: 'Participants want to be helpful and confirm what the researcher may want to find out'). Participants were asked to think about whether they had the described tendencies in the experiment and talked about them.²

Data analysis

Research assistants who weren't present at the focus groups transcribed the audio recordings. The first author and another research assistant then checked the transcripts for accuracy against the tape. As focus groups were conducted in Czech, the transcripts are in the Czech language as well. The transcripts in English in this article are selected extracts translated by the first author. The research team first reviewed each group transcript in detail to begin the initial open coding and then followed by the analysis based on Heideggerian approach (Smythe et al., 2008). This approach allows us to understand the hermeneutic processes of development results themes based on our pre-existing understanding of investigated phenomena formed by our research questions. Shared meanings across all transcripts (constructive patterns) were grouped to themes relevant to research questions. Decisions were made by all authors of this article regarding which part of the discussions provided the most information to answer our research questions about how participants experienced the experiment. Relational themes (present in some transcripts) were grouped according to meaning under the category of shared meanings. As the analysis proceeded, data were additionally reduced through the use of hermeneutic circle (Paterson & Higgs, 2005), that is by comparing and contrasting the narratives from all four focus groups and groups of similar quotes were categorized together (Rabiee, 2004). These main categories are represented by themes in the results section.

Results

Analysis of the data resulted in 14 categories, which were grouped into 4 key constitutive themes: (1) environmental factors influencing (dis)honesty in the experiment; (2) selection strategy in a cheating environment; (3) attitudes toward dishonest behavior in the experiment; (4) confession to experimental demand.

Theme 1: environmental factors influencing (dis)honesty in the experiment

Participants were asked if there was a factor in the experiment which influenced them to behave honestly. In the first instance, none responded that there was such a factor. After reformulating this question to a projective as one ('Are there some aspects of the experiment that can influence other people to behave honestly?'), discussion opened in every session of the focus group.

There emerged two main positions, approximately equally represented, debated against each other. Participants who felt psychically safe and anonymous and those who, for various reasons, did not believe the experiment was actually anonymous. Some participants reported beliefs in non-existent features in the experiment, such as: the presence of a device measuring pupil dilatation, an experimenter standing behind their back, or hidden data pairing algorithm that prevented them from behaving dishonestly. In contrast, the others referred to information from the informed consent where guaranteed anonymity and the norm prohibiting lying to the participants were promised. Variability in the participants' statements indicates different consent information handling. While some participants were accepting and trusting, others disregarded informed consent – for example, they mentioned they ignored, forgot or mistrusted it.

The topic of possible factors influencing (dis)honesty was covered by concerns over *anonymity*. Participants specified three kinds of *concerns over anonymity* (see Table 1 for quotations on aspects of each *concern*). Part of the participants showed zero sign of doubt about the *anonymity* of the experiment. They believed they could trust the informed consent, so they didn't have to

Table 1. Quotations illustrating three facets of environmental factors influencing (dis)honesty in the experiment.

Anonymity	Misleading participants is officially banned in economic experiments, but the question is how much does one trust the people who do it. (Group 1) They can't read my mind. (Group 4)
An experimenter's behavior	I think a lot of people thought that someone was standing behind their back or that someone was counting the time they took to click ... Or that the experimenter would find out somehow [about the cheating], even though it had been written that he wouldn't. I think that many people must be like this. (Group 2) I was sitting with my back turned to him [the experimenter] and it also occurred to me if he was sitting there or not, but I wasn't checking it. But I was a little worried about whether he was looking at me. (Group 3)
System of control	I am a bit paranoid. I thought to myself that there could be an eye camera somewhere, but ... then read from the pupils how long does the person take to respond, but that's me being paranoid quite a lot. (Group 1) It occurs to me that maybe some people could think that in the moment when the contract [payment of participation fee] was filled in it would be somehow matched with the responses, ... that the document was uploaded to a shared file. And that it could be additionally looked up through some kind of an identificatory. (Group 3) I was afraid that if I'd cheat, the system would punish me somehow, that it wouldn't give me the money or something like this. (Group 2)

worry about their being associated with their behavior in the experiment. Second, there were concerns about the *experimenter's behavior*. If a research assistant (RA) was present in the room, there was a fear of possible surveillance. Third, some participants believed that there was some kind of *system of control* on the computer. For example, they mentioned a pupil-reader or a system that pairs their responses in the experiment with personal information obtained by the experimenter when paying them the reward.

Theme 2: selection strategy in a cheating environment

Participants were asked how they decided whether to select a cheating-allowing or cheating-prohibiting environment. When participants talked about how they chose a version of the task, they did not report only the criterion of *possibility to cheat* - although it was the most represented answer. Participants also mentioned factors like the difference in the *speed of the task* (even though there was not a significant difference) or how *entertaining* the option seemed to be. There were also some choices based on a *randomness misunderstanding*. A minority of participants said they felt they had to choose because of the experimental situation - *forced choice* (see Table 2 for exemplary quotations).

The statements about the perceptions of the nature of the task other than a cheating opportunity do not necessarily mean that the possibility of cheating was not a factor in the decision. Participants could lie or justify their choices *ex post*. However, these responses suggest that there were other factors that played a role in their decision.

Theme 3: attitudes toward dishonest behavior in the experiments

The participants were asked if cheating in an experiment was unethical when the experimenter gave them an opportunity to make more money by lying, and how much was their behavior in the experiment influenced by the fact that it was an experimental situation.

Participants had different perspectives on dishonest behavior in the experiment. Some participants did not see dishonesty in an experiment as a moral problem at all because it was the subject of study, so '*cheating was permitted*'. Some participants perceived the cheating just as financial compensation for the time they spent on the experiment (*a transactional view of the experiment*). The rest of the participants did not distinguish between cheating in a *real environment and laboratory one* (see Table 3 for exemplary quotations of *attitudes toward dishonest behavior in experiments*).

Table 2. Quotations illustrating factors influencing selection in the experiment.

Possibility to cheat	<p>I could choose. I chose the part where you could cheat ... My biggest motivation is money. It is, of course, an experiment and it is an interesting experience, but I also don't think it would affect decision making [reaction to another participant who mentioned that he had decided not based on money, but on experience as well]. I always try to click on what is most profitable at the moment.</p> <p>I just thought charity was such a possibility for redemption. I was a dud and I lied to myself, thinking that 8 out of 10 cases I thought it would be odd and it was actually even, and now I have a chance to be redeemed, so I will give half of this money to People in Need [a Czech charity].</p>
Speed of task	<p>I could choose. I'm not sure which one I chose. I think one option was faster because you had to click less. So I chose that because I always put odds anyway, so I just continued with odds. (Group 2)</p> <p>I also had the option to choose and I decided on the first option because it was faster than the second one. Since it was random, I was just clicking on the right button, so it was very fast. Given that I don't have the tendency to cheat, and I don't like it much. The faster option, the better option. (Group 4)</p>
Entertainment	<p>I could choose and I chose the option where I say if it's odd or even and the computer then determines it, and I chose it because I just wanted to play. It sounds weird, but I just said to myself that it's the computer versus me. (Group 2)</p>
Randomness misunderstanding	<p>I could choose. I thought, I will only choose one outcome in my prediction for the whole game [even or odd], and it always didn't work out for me. When I changed the prediction results were the opposite. So I was wondering if the experiment was researching some strategies that would always show the exact opposite of what I was saying. (Group 3)</p> <p>It seemed to me that something was off in the option of a computer check. I thought to myself, if there is some system to it, that the results are always two even, two odd, two even, but then it didn't work out to be the case. There weren't enough rounds to figure it out. (Group 1)</p>
Forced choice	<p>It [the experiment] simply offered me the [cheating] option. So I had to make a decision. (Group 2)</p> <p>The fact that we have to choose from several options don't reflect reality because, in reality, it isn't just five options to choose from but an infinite number of possibilities influenced by various factors. (Group 1)</p>

Theme 4: confession to experimental demand characteristics

Participants were shown cards describing experimental demand characteristics in an experiment (see Appendix). After reading the cards, they were asked if they behaved in some of the described ways. In general, participants had no problem identifying with the presented types of behavior. In additional comments on their behavior, they were willing to share some specific examples. As a *confession to experimental demand characteristics*, we coded every response that contained an element

Table 3. Quotations illustrating attitudes toward dishonest behavior in experiments.

Cheating is permitted	<p>Yes, if it weren't an experiment, I'd be scared that something could happen if I cheated, however this time I was a part of an experiment and I was allowed to do it by the experiment. (Group 2)</p> <p>When it comes to me with the possibility of cheating ... I'd try not to cheat in real life, whereas in the experiment it doesn't really matter that much, but in real life it's important to me, because that's just how you present yourself: when you just do something wrong, you know you did something wrong and it has real consequences. Whereas if one cheats in the experiment, it's for experimental purposes and it maybe pays, but it's not wrong actually, because it is a finding for you. (Group 4)</p>
Transactional view of the experiment	<p>I participate in experiments quite often and I view it in the manner that since there is the possibility of a reward, and when it is as random as this one, I downright consider it a game, that when I consider how much time does a person sacrifice, there is a payback, even if it's minimal. (Group 1)</p> <p>I've been thinking, how much I value my time, and I'm spending, like, 1.5h here, and if I get the 200 CZK, that's good. (Group 4)</p>
Laboratory = real environment	<p>I've made a moral choice, I don't steal money from anyone in real life either. (Group 2)</p> <p>It never occurred to me that it could be perceived other than as a fraud. I would lie to myself pretending to have successfully guessed something I haven't actually guessed. I have no problem doing it, but I don't like it. So I perceive it as a fraud like any other. (Group 4)</p>

of identification with a behavior presented on the card. Participants who identified with the first behavior described as, ‘Participants want to be helpful and want to confirm what the researcher may want to find out,’ were coded as a *supportive role*; those identifying with the second behavior described as, ‘The participant attempts to recognize the experimenter’s hypotheses and tries to destroy the credibility of the study,’ were coded as *destructive role*; and those identified with the third behavior described as, ‘So-called loyal participants who literally follow the researcher’s instructions, even though they might behave differently in real life,’ were coded as *loyal role* (see Table 4 for exemplary quotations *confession to experimental demand characteristics*).

Discussion

The findings of the experimental study (Houdek et al., 2021) are that the participants cheated a little if they had the opportunity to do so, and those who chose the cheating-allowing version of the task cheated much more than those who were assigned the same version of the task at random. The results support the idea that people choose environments that fit their (dis)honest personality. However, the focus groups with participants revealed that there can be more nuance or even different reasons for decisions made during the experiment: some participants made decisions based on how entertaining or fast a task seemed and behaved honestly because they falsely believed that dishonesty could be detected, or behaved dishonestly because they felt entitled to help themselves to a higher monetary reward for their time spent on the experiment. This finding is in line with the entitlement effect observed in previous studies (Hoffman et al., 1994; but see Demiral & Mollerstrom, 2020)

The finding that some participants primarily consider how entertaining a task is when deciding what to do in an experiment may shed new light on the results of some past studies on dishonesty. For example, Ruffle and Tobol (2014) found that individuals behave more honestly the greater the temporal distance between the decision task and the reward. They explain it by time preferences, but perhaps the result is caused by the participants’ curiosity about what happens when they cheat, which was less relevant in the case of distant rewards. In another study, Gino and Ariely (2012) showed that dispositional creativity is a predictor of unethical behavior, possibly because creative people have a greater ability to justify their dishonest behavior. An alternative explanation suggests that more creative participants may cheat simply because it is a more interesting (i.e. creative) thing to do in an experiment. There is evidence that some people prefer to experience electric shock rather than ‘do nothing’ in a laboratory environment (Wilson et al., 2014). This type of ‘sensation seeking’ mindset can influence choices in experiments in general. It is therefore important that the experimental and control conditions in an experimental design should be perceived equally even in seemingly ‘unimportant’ dimensions (e.g. fun, speed, etc.). The participants’ information acquisition (Capra, 2019; Stillman et al., 2018), verbal reports about current behavior (Lundgrén-Laine & Salanterä, 2010) or physiological correlates of the decision-making process (Balconi & Fronda, 2019) in a task should be used more to identify and control for these variables.

Table 4. Quotations illustrating confession to experimental demand characteristics.

Topic	Quotation
Supportive (or mixed) role	When I was starting with experiments last year, during the time when I was applying to university, I tended to try to confirm what the scientists wanted to find out. Now when I’m already attending your university (after I was accepted, I mean), I try the opposite, to make it a little spicy for you. Sometimes I try to sabotage it. But other times I’m trying to work without thinking about what the scientist wants to learn when it’s some experiment that matters to me. (Group 2)
Destructive role	I will stand out a bit. I think that I’m most likely the second type: not that I would want to sabotage it in any way, but I think that I wouldn’t agree with the research 100% and would think that it’s supposed to be some other way around. (Group 3)
Loyal role	I’m the third type more or less. And one of the significant factors is that it’s the easiest way to do it. Listening to those instructions, I want my answers to be valuable and also there is basically nothing easier than doing what someone tells me to do. (Group 3)

The forced choice in the experiment also proved to be potentially problematic. Even in a decision in which participants would not choose any of the options at hand in real life or avoided the situation entirely, they had to choose. This stated aversion was not yet strong enough to motivate them to leave the experiment. The importance of being able to choose an environment was already demonstrated in measurement of social preferences (Lazear et al., 2012) when the choice to avoid an environment where sharing is possible reduced aggregate sharing behavior. The experimental design investigating dishonesty should therefore include a more comprehensive set of choices, including a possibility of self-selection to a task or a choice of 'leaving this task' or 'undecided' to properly measure heterogeneity of an intensity of preferences or values of participants.

Our results also showed that the participants have a number of misconceptions about the nature of various common features of an experiment. Some participants did not believe that the die rolls were truly random. They had a tendency to find patterns in the outcomes and tried to come up with a strategy for predicting them. That supports the findings of previous studies that people expect the essential characteristics of a chance process to be represented not only overall in the entire sequence, but also locally, in each of its parts (Gilovich et al., 1985). The illusion that an outcome is a result of effort and not luck can lead participants to cheat more because they excuse their behavior by higher effort (Gravert, 2013). The (false) belief that the outcomes in the experiment are not really random may lead participants to feel deceived by the experimenter and therefore entitled to cheat more in return. Another effect of misunderstanding or mistrust can be the (incorrect) suspicion that the experimenter can control not only the outcomes but also somehow see if a participant behaved honestly or not - even in tasks, such as the mind-game, in which it is absolutely impossible to identify cheating at the individual level. When designing experimental conditions featuring randomness, researchers should take into account that a portion of participants will likely misunderstand or mistrust the nature of the random process, try to find some nonexistent patterns, and behave like they do not believe the information describing the experimental tasks. In the case of the mind game, some participants may arguably avoid reporting patterns of seemingly 'improbable' wins to avoid suspicion (Schild et al., 2020). Their cheating will be therefore affected by (possibly erroneous) estimates of what is and is not likely.

Furthermore, the perception of cheating in the laboratory environment differs. Some participants report that there is no difference between cheating in the real-world and in the laboratory. On the other hand, some participants perceived the cheating in the experiment as something that is expected from them due to experimenters' demand. There is evidence that the correct guess about the purpose of an experiment on dishonesty can lead to more dishonest behavior (Skowronek, 2020). A similar issue is the perception of the experiment as a transaction, when participants perceive the experiments only as an opportunity to make money and remorselessly maximize their profit. Indeed, such reported framing may be only post-hoc rationalizations of one's own dishonesty, and people who are likely to perceive the experiment in this way are also more likely to similarly perceive other situations in real-life and therefore cheat more often. The transactional view of the experiment could also lead to other types of demand-characteristic effects. Participants could be motivated to exchange their 'desirable' behavior for a reward. Various types of reported demand-characteristic behavior could increase in data, and potentially jeopardize the validity of the findings if demand-characteristics differ between conditions (Verschuere et al., 2018).

What is indisputably problematic are concerns over anonymity. Although anonymity was guaranteed, some participants did not believe it. This finding is in line with a study by Franzen and Pointner (2012) suggesting that despite special effort to ensure anonymity at least some participants behave like they were being monitored. We already know that perceived anonymity is associated with a degree of cheating (Jacobsen et al., 2018).

Indeed, the presented qualitative study also has several limitations. Even though our study is supposed to inform and improve experimental research in general, it has to be noted that some of the identified issues, especially those related to the subjective perceptions of the experimental situation, may be less relevant for economic experiments in which there is limited variability in how

participants understand the experiments. For example, when participants are explicitly informed about how much they value given commodities and asked to bid or trade with others, they cannot conceptualize their task in too many different ways. On the other hand, it was shown that experimenter demand effects affecting understanding of how participants should behave could be present in a wide range of economic experiments; from studies of social preferences using dictator games to experiments with artificial markets studying the evolution of market bubbles (Zizzo, 2010).

Moreover, our study deviates in various aspects from central tenets of experimental economics methodology (Bardsley et al., 2020). Although we offered a substantial monetary reward for participation in order to avoid self-selection of a more cooperative, engaged or otherwise internally motivated subset of participants, unlike in the standard economic experiments, we were not able to incentivize participants' responses. The social desirability bias is a problem even for the focus groups paradigm (Grimm, 2010). We tried to highlight that we are interested in participants' genuine experiences from the experiment and presented all instructions in a neutral language, however we cannot be sure whether participants' answers were not also driven by perceived experimental demands. In addition, it is possible that the participants were not able to remember the real reasons for their past behavior, report the thought processes reliably, and could instead try to rationalize their behavior by ex post explanations.

In our data collection and analysis, we did not consider the effect of the number of previous participations in laboratory experiments on perceptions and expectations related to the current study. Among the participants of the focus groups, there was roughly a third with no previous experience, one third that participated in up to three previous studies, and the rest with more than four previous participations. Because previous participation, especially in psychological experiments that are also conducted in our laboratory,³ is suspected to alter perceptions and behavior in experimental tasks (Hertwig & Ortmann, 2001), incorporating the considerations of participants' previous experience into a future research design could provide valuable insights into how such experience can influence results of experimental studies. Finally, we did not attempt to estimate the prevalence of specific types of participants' responses. Our aim was to gather in-depth insights into a wide range of participants' experiences of the experimental situation (Carminati, 2018) and show the variability in their perceptions of the experiment (Reed & Payton, 1997). In line with this approach, we conducted the group discussions in such a way that when a specific perception of the experiment was voiced and reflected in the group, the group's discussion no longer focused on it. Upon hearing of an experience, other members could become biased - either more likely to come up with support of it or less likely to express their agreement in order to not repeat something that was already said. Therefore, it is impossible to say how many of our sample's participants experienced it or how frequent a similar perception is. In consequence, we cannot state whether some of the identified issues were prevalent enough to seriously threaten the validity of the conclusions made by the experimenters in the original study (Houdek et al., 2021). However, their conclusions are not based on a single experiment but supported by several conceptual replications across different cultural settings and experimental paradigms, which seems to at least partially alleviate the validity concerns.

Conclusion

This paper aims to describe how participants interpreted an experiment which gave them a chance to behave dishonestly. The analysis of focus group discussions showed large variation in the perceptions of the experimental condition. The heterogeneity of the participants' perception of an experimental intervention may challenge the clear identification of the causal effect of an intervention. The participants' information acquisition, reports about ongoing thoughts and behavior, or physiological correlates of the decision-making process should be used more frequently to control for these problems of causal identification. This paper also demonstrates how focus groups conducted with participants of an experiment after data collection can provide a clearer understanding of the

observed data. Integrating qualitative methods in a pilot phase of an experiment could be useful and reduce unnecessary misunderstandings of experimental design by the participants.

Our finding suggests reasons why comparable experimental designs may lead to very different behaviors of participants and why the results of laboratory studies may not be transferable to real-world situations (Dimant et al., 2019; Kettle et al., 2017; Schild et al., 2019). If the results of laboratory experiments on cheating are to inspire effective measures to reduce dishonesty in organizations or society, they need to be contextually sensible, and the experimental manipulations should not be misinterpreted by the participants. Evidence-based management and policy-making are already challenging enough due to the complexity of solving issues and the high aversion of organizations towards experimental research and its findings (Haidt & Trevino, 2017; Rynes et al., 2018).

Notes

1. WEIRD is an acronym for Western, Educated, Industrialized, Rich, and Democratic - characteristics of the majority of participants in social science studies (Henrich et al., 2010).
2. The complete list of all questions can be found at <http://tiny.cc/ty9oiz>.
3. Even though great care is dedicated to avoid any kind of deception, from anecdotal evidence it seems that even some of those who participate for the very first time suspect some kind of deception on the part of the experimenter.

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Appendix

Preliminary questions:

1. A few weeks ago, you were participants in an experiment 'how people decide and how are personality characteristics related to some kinds of decisions.' Depending on what you remember of it, what do you think the topic of the conversation today will be?
2. Can each of you briefly say how you experienced the experiment? What stuck in your mind?
3. Did you see the experimental situations as an opportunity for deception?
4. In what part of the experiment do you think it was easier to cheat, and why? Alternatively, what group were you in and how did you cope?
5. Some of you could choose which form of the experiment you prefer during the course of the experiment (choice of Round 3, i.e. BEFORE: state the prediction and then find out the prize or, AFTER: in the mind expect the result and then choose whether or not they guessed and earned). What influenced your choice in this part?
6. Can you tell what role the fact that this is an experiment played in your decision?
7. Can you tell me what role the financial reward played in your decision?
8. Can you remember how it made you feel?
9. Can you find a similar situation from 'real life' that is similar to the experiment? Did you (would you) behave differently in it?
10. As we mentioned, in various parts of the experiment you had the opportunity to cheat. Was there a factor in the experiment that made you act honestly - like the presence of experimenters; the environment where the experiment took place; the fact that it took place on a computer, the presence of many people; something else?
11. Do you think there are people who, in such an experiment, might have the impression that someone is recording them, for example, or otherwise recording other activity than the one the researcher's report?
12. What were your expectations of what the experimenters wanted to find out? Why? Have these expectations affected your behavior?
13. Did you feel that you were being 'pushed' by something in regard to how you are supposed to act in the experiment? (why?)
14. What factors could have led to someone cheating?
15. What factors could have led to someone behaving honestly?

Tab 1

People in experiments react in different ways when they feel they know what the researcher wants to find out.

- a) Participants want to be helpful and confirm what the researcher may want to find out.
- b) The participant attempts to recognize the experimenter's hypotheses and tries to destroy the credibility of the study.
- c) Or there are so-called loyal participants who literally follow the researcher's instructions, even though they might behave differently in real life.
- d) Participants who are afraid of how their responses would be interpreted and prefer to respond in a socially desirable way (i.e. how 'should' be responded to).
- e) Is that surprising to you?
- f) How do you explain these behaviors?
- g) If you could choose one behavior, what would it be like? Why?

Tab 2

People in the experiments react in a different way than the researcher expects because they are influenced by different factors than the researcher considered.

- a) Participants are influenced by the 'artificiality' of the laboratory experiment situation.
- b) The participant despises experiments.
- c) The participant has little interest in the content of the experiment and makes his choices without much thought.
- d) Each person has different standards, different experiences, and lessons learned from them. For example, he can often cheat because he's never been 'caught' at it, etc.
- e) Do you agree with the individual factors?
- f) Do you know any of them from your own experience?
- g) Can you think of any other factors that might have played a role in the behavior of the participants besides those mentioned?