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Ethics Simulators

Utilizing Digital Games to Study Ethical Decision Making in an Immersive Context

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Abstract

This study used a digital game to create a contextually rich environment in which to study ethical decision-making. A digital game was used as a simulation to investigate the effect of exposure to an ethical code prior to decision-making in a work context. Participants were undergraduate college students enrolled in psychology courses. Immersing participants in an environment with competing incentives and social cues was expected to elicit more natural responses. The game environment also provided participants with the opportunity to make a series of decisions. Results of the study examined the level of immersion and interest in the topic that participants experienced while playing the game as well as the types of decisions they made playing the game. Decision-making behavior was examined based on scores, behavior, and perceptions about the activity in a post-activity survey.

Computer Games as a Research Tool

One common method for assessing moral decision-making is to use hypothetical scenarios or vignettes to examine self-reports of how participants would potentially respond when placed in an ethically challenging situation (Lievens, Sackett, & Buyse, 2009; McKinney, Emerson, & Neubert, 2010; Siyahhan, Barab, & James, 2011). This is a practical method but has some potential drawbacks. A vignette cannot carry the full situational context that would be influencing a real life decision. This lack of context in hypothetical scenarios can increase participants' tendencies toward analytical and abstract decisions, instead of an engaged, realistic decision-making (Siyahhan, Barab, & James, 2011).

Another issue with the use of vignettes is that participants may be motivated to provide the most correct answer instead of their most likely behavior (Lievens, Sackett, & Buyse, 2009). An additional challenge in decision-making research is the number of decisions participants will make during an experiment; sometimes as few as one (Mazar, Amir, & Ariely, 2008; Siyahhan, Barab, & James, 2011; Zhong, 2011). While this data is useful it can only establish a short term pattern of decision-making. In a working situation an individual will be making many decisions, within a similar context, over an extended period of time.

One way to account for many of these methodological issues is to use a computer game or simulation. A game provides participants with a consistent decision context. Similar to real situations, games may include conflicting influences (players can receive points for either ethical or unethical actions). Games can also reduce analytical response by imposing a limited timeframe for decisions; and have the potential

to evoke an empathetic response. By using a game which incorporates an ethically complex reward system, characters designed to elicit empathy, and a mentally challenging task we hoped to obtain more realistic participant responses.

The purpose of the current study was two-fold. The first goal was to examine perceptions of engagement and involvement with the task by utilizing a digital game as the means to examining decision-making behavior. The second goal was to examine how ethical decision making is influenced by the introduction of an ethics code. An ethical code is likely to influence ethical decisions and behavior by increasing the saliency of ethics, and through creation or support of social norms. As this influence could affect different types of behaviors, a series of hypotheses were proposed to examine the effects of exposure to an ethical code on different behaviors. It was predicted that participants who read an ethical code would earn a higher in game ethics score (Karma Rank) relative to those who do not read an ethical code. Additionally, because interventions can have differential effects on specific behaviors the behaviors which are incorporated in the global measurement were examined independently (hiring child workers, use of harmful factory items, hiring safety workers, training workers, worker hydration, amount of worker death or injury).

Method

This study was conducted in a university classroom setting. Participants were divided into two groups, those who read an ethical code prior to game play (n = 56) and those who did not (n = 32). Participants played the online game *Sweatshop* on their laptop computers and took an online survey to provide information on their game play. Throughout the game, players made decisions that influenced the health, safety, and satisfaction of their workers. The player's objective in the game was to complete the work contract for each level while acquiring points based on work speed, work quality, and cash accumulated. The goal of this study was to examine player's level of engagement and types of ethical decisions made with in the game. Specifically, did players prioritize worker health and wellbeing compared to profit as represented by the accumulation of points.

Results

ANOVA was used to explore differences in group behaviors within the game. Specifically participants usage of in game features (hiring child workers, use of harmful factory items, hiring safety workers, training workers, worker hydration, amount of worker death or injury) were compared . There were no significant differences in reported game behaviors between participants who read an ethical code prior to game play and those who did not. Statistical power was limited by the small sample size.

Participants were also assessed based on their level of engagement with the task and the importance of understanding issues of ethical decision making in a work-setting. Participants were assessed based on their engagement with the "For Real" information that was embedded in the game. Participants who reported reading the "For Real" information between levels (experimental n = 48, control n = 26) were asked "How did you feel about the 'For Real' information the game presented?" The most common theme was **Knowledge**; comments in this theme referred to the information presented being new or engaging and were split into the sub-themes *Informative* (experimental 15%, control 12%) and *Interesting*. ***Informative.*** Some respondents referred to the information presented as informative, including comments about the need to increase awareness of these conditions. ***Interesting.*** Only those

in the experimental group referred to the information presented as interesting (17%), suggesting a more personal engagement with the information., Under the main theme **Emotional,** both groups indicated that the information produced some sort of *Emotional Response* (experimental 8%, control 12%); but unique to the experimental group were comments describing the information as *Sad* (19%). ***Sad.*** Sad was the only descriptive word that occurred often enough to be identified as a separate sub-theme. Emotional connection to a situation has been identified as increasing the likelihood of an individual deciding to behave ethically. The higher frequency of comments in the experimental group identifying presented information as interesting, emotional, and sad suggest a more personal and engaged reaction to the information among participants who read the ethical code. Together, these findings lend support to the idea that games can provide an immersive way to understand differences in ethical decision making.

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