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Playing under threat. Examining stereotype threat in female game players

Lotte Vermeulen^{a,*}, Elena Núñez Castellar^a, Dirk Janssen^b, Licia Calvi^c, Jan Van Looy^a^a Department of Communication Sciences, iMinds-MICT-Ghent University, Begijnhoflaan 464, 9000, Ghent, Belgium^b Pivotal Labs, 1333 2nd St, Santa Monica, CA 90401, CA, USA^c mADE-NHTV-Breda University of Applied Sciences, Monseigneur Hopmansstraat 1, 4817 JT, Breda, The Netherlands

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ABSTRACT

The present study assesses the impact of stereotype threat on how women experience digital gaming in an evaluative context. By means of a controlled lab experiment, this study tested the effects of reinforcing stereotypical information suggesting that women are less competent players versus the effects of countering this stereotype. In doing so, game leaderboard scores were manipulated distinguishing between Stereotype Neutral (high scores without gender cues), Stereotype Boost (female-dominated high scores) and Stereotype Threat (male-dominated high scores) conditions. Results indicated that gamer identity, trait competitiveness, and playing habits modulate the experience of social identity threat. Performance and affective responses elicited by the Stereotype Threat Condition were more negatively affected in case of strongly identified gamers, highly competitive women, and/or avid players when compared with the other conditions. However, virtually no differences were observed when comparing the Stereotype Neutral and Stereotype Boost conditions. Overall, the present study demonstrates the existence of the stereotype threat mechanism and how this undermines the game experience of female players within digital game culture.

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1. Introduction

It is generally believed that everyone maintains multiple social identities (Good, Dweck, & Aronson, 2007). Moreover, these identities can be degraded in particular contexts. In the case of digital games, women's social identity has been threatened by contexts in which they are numerically underrepresented (e.g., 'core' gaming) (Williams, Consalvo, Caplan, & Yee, 2009), portrayed as hypersexual (Downs & Smith, 2010), subtly or overtly assaulted (Fox & Tang, 2014), or seen as unqualified with men being the "gaming experts" (Schott & Horrell, 2000). Together, these conjure up stereotypical ideas about women not belonging and being less competent than men when playing games. Prior research has shown that the mere belief of playing against males is enough to invoke negative gender dynamics resulting in heightened emotional strain and troubled skill perception of female players (Vermeulen, Núñez Castellar, & Van Looy, 2014). The current study builds upon this work by showing how stereotype threat operates in an evaluative gaming

environment. The authors will not only look at effects of stereotype-enhancing or -reducing situations, but also inquire into how perceived threat interacts with other explanatory variables of performance and affective outcomes. To our knowledge, no other study has examined stereotype threat as a complicated and nuanced mechanism in the context of women playing digital games. Understanding how processes of stereotype threat operate in contemporary game culture will add to insights pertaining to research on female players.

1.1. Stereotype threat in digital gaming

From the social identity theory perspective (Tajfel & Turner, 1986), individuals employ their group membership as a basis for self-evaluation. People have a wide repertoire of category memberships such as being a woman and a gamer, which are represented as social identities in individual members' minds (Hogg, Terry, & White, 1995; Moje & Martinez, 2007; Spencer, Logel, & Davies, 2015). Achieving or maintaining a positive self-concept through normative group actions and making favorable comparisons between in- and out-groups is essential for individuals (Hogg

* Corresponding author.

E-mail address: lotte.vermeulen@ugent.be (L. Vermeulen).

et al., 1995; Inzlicht & Schmader, 2012). However, when positive group perceptions are challenged, individuals may experience a sense of social identity threat. Whilst there are several types of social identity threat (Branscombe, Ellemers, Spears, & Doosje, 1999), stereotype threat is the most well-known and most-studied in social psychology (Ben-Zeev, Fein, & Inzlicht, 2005; Cadinu, Maass, Frigerio, Impagliazzo, & Latinotti, 2003; Good et al., 2007; Inzlicht & Kang, 2010; Keller & Dauenheimer, 2003). It is induced by evaluative situations in which negative stereotyping of a group causes its members to fear the risk of confirming it as a self-characterization (Steele, 1997; Steele & Aronson, 1995). The mere knowledge of the negative stereotype can be sufficient to initiate this mechanism even when one does not endorse the stereotype (Cooper, 2006).

Whilst numerous studies have shown that women suffer from stereotype threat in domains such as math (Ben-Zeev et al., 2005; Christy & Fox, 2014) and leadership (Davies, Spencer, & Steele, 2005; Gupta, Goktan, & Gunay, 2014), this mechanism has only barely been explored in the context of digital gaming (see for example: Richard & Hoadley, 2013). Given that the social identity of being a woman is devalued vis-à-vis digital games (Consalvo, 2012), it is plausible that stereotype threat impairs the experience of female players in situations where a negative stereotype might be confirmed. The purpose of the present study is to explore whether and how stereotype threat influences the way women experience gaming in an evaluative context. Concretely, the aim is to investigate the effects of reinforcing the stereotypical information suggesting that women are less competent than men at playing versus the effects of countering this stereotype in a controlled experimental set up. A control condition where no gender information is provided has been implemented to serve as comparison. Since past studies revealed that offering positive female role models can alleviate the negative effects of stereotype threat (Drury, Siy, & Cheryan, 2011; Marx & Roman, 2002; McIntyre, Paulson, & Lord, 2003), it is hypothesized that when countering this stereotype by showing that other females were highly competent in the same evaluative context (i.e., Stereotype Boost), women will report a different gaming experience, likely more enjoyable, than when this stereotype is enhanced (i.e., Stereotype Threat).

1.2. Performance and affective responses to stereotype threat

In order to assess the impact of the experimental manipulation, several dimensions of gaming experience will be considered. First of all, it is crucial to inquire into performance as previous studies have shown that the effects of stereotype threat often manifest themselves in performance deficits (Cadinu, Maass, Rosabianca, & Kiesner, 2005). For instance, it has been found that the unpleasant idea that one's behavior could be judged in terms of the stereotype might paradoxically confirm this stereotype by underperforming to someone's potential (Good et al., 2007). Likewise, research has revealed that stereotyped identities anticipate this process by having low performance expectations prior to an evaluative task (Cadinu et al., 2003). Applied to gaming, it is expected that female players exposed to stereotype threat will show decrements in expected and objective performance compared to women unexposed to this threat. A similar pattern is predicted for perceived performance as past research suggests that woman gamers tend to underestimate their performance when playing against men instead of other women (Vermeulen et al., 2014).

Secondly, affective responses are assessed since previous research asserts that stereotype-induced situations may generate negative affective responses in individuals. In fact, one of the main drivers of the stereotype threat mechanism is increased anxiety (Bosson, Haymovitz, & Pinel, 2004). This feeling derives from the

“fear” of confirming a negative stereotype about one's group membership (Steele & Aronson, 1995). Additionally, the literature indicates that stereotyped identities under threat report more negative feelings such as low confidence (Richard, 2015; Smith, 2004) and high stereotype-associated concerns (Lee & Nass, 2012). Since emotions have been shown to be important regulators of behavior, defining further action tendencies or the lack thereof by individuals (Frijda, 1988), it is hypothesized that female players exposed to stereotype threat will experience more negative affective outcomes than women unexposed to this threat.

1.3. Moderators of stereotype threat

Finally, the present study investigates potential moderators of how women perform or experience stereotype threat in an evaluative gaming context. Given the situational nature of the stereotype threat mechanism (Spencer et al., 2015), including moderators could help explain why negative stereotypes in one domain may not affect two threatened identities in a similar manner (Logel, Peach, & Spencer, 2012; Spencer, Steele, & Quinn, 1999). Four stereotype threat moderating variables are reported on in this experimental study. First, identification with the domain of activity in which one is negatively stereotyped plays an important part in the stereotype threat process (Steele, Spencer, & Aronson, 2002). As some women care more about digital games than others, it is possible that women who identify more strongly as a gamer are more susceptible to threat effects compared to women who do not attach much importance to this identity (Smith & White, 2001). This is not unsurprising because the self-esteem of high identifiers depends strongly on a positive group representation (Good et al., 2007; Steele, 1997). Gamer identification, however, has been reported as problematic in the case of female players. Although previous research has shown that women are little inclined to label themselves as gamers, this does not necessarily mean that they are not playing (Shaw, 2012). Hence, because of women's low identity profile as gamers, it remains important to take into account their playing habits as a potential second moderating variable. A third moderator of stereotype threat is the degree of identification with the stereotyped group itself, i.e., women. Whilst some studies claim that individuals who strongly identify with their group are more vulnerable (Davies et al., 2005; Schmader, 2002), others posit that these people are more protected from the negative impact of stereotype threat (Chavous, Rivas-Drake, Smalls, Griffin, & Cogburn, 2008; Oyserman, Harrison, & Bybee, 2001). Consequently, a close affinity with one's female identity can act as a buffer or, vice versa, as a vulnerability to stereotype threat in digital gaming (Good et al., 2007). Finally, this study considers women's trait competitiveness as a final potential moderator. As previously shown (Vermeulen et al., 2014), level of competitiveness affects how women think about their own and others' gaming skills. Whilst low competitive women endorse more stereotypical beliefs, high competitive women are less prone to negative gender dynamics. In this vein, it is predicted that gamer identification, play habits, woman identification, and trait competitiveness modulate the relative effects of stereotype threat on performance and affective responses.

2. Methodology

2.1. Participants

Participants were recruited on site of NHTV Breda University of Applied Sciences and received a reward of 10 euros for their participation. Only women were selected considering the study's focus on the gaming experience of female players exclusively. All participants were ingenuous to the research purpose. One hundred

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