

Influencing Prejudice: Different Forms of Intergroup Contact and Sexism in Video Games

Research-in-Progress

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Abstract

Video games have become a major manifestation of digital innovations in a digitized contemporary society. However, the societal implications of the diffusion of video games into society are dealt with shabbily in existing information systems research. With this study, we want to make a first step to close this gap by looking at intergroup contact between males and females in video games and subsequent effects on prejudice (specifically sexism). Therefore, we build our study around the social identity approach and the contact hypothesis from sociology and social psychology. Accordingly, we propose four different forms of indirect intergroup contact having different effects on prejudice: 1) positive human, 2) negative human, 3) positive avatar, and 4) negative avatar intergroup contact. Within the paper we illustrate the theoretical background, our methodological approach, and give a short outlook.

Keywords: Contact hypothesis, intergroup contact, prejudice, sexism, video games

Introduction

More than 100 years ago Karl Marx already stated “it is not the consciousness of men that determines their existence, but their social existence that determines their consciousness” (Marx 2010). Accordingly, societal changes through the evolution of technology have meaningful impacts on our daily realities of life (Bandura 2002). One tool constantly transforming societies within the last decade’s is the dissemination of digital innovations. Manifestations of this constant disruptive impact can be found in almost every domain of our contemporary lives involving activities in the context of work (Allen et al. 2013; Bala and Venkatesh 2013; Garfield and Dennis 2012) and private lives (Chieh-Peng Lin and Bhattacharjee 2010; Hamari and Keronen 2017a, 2017b; Xitong Li and Lynn Wu 2018). However, little attention has been paid to societal consequences of the diffusion of digital technologies. This is unfortunate, since more knowledge about effects of the bright (e.g. productivity, transportable communication) and the dark side (e.g. mental and physical health, privacy and security) of these developments would be highly valuable for citizens, politicians, and researchers interested in societal change.

The study at hand follows this reference and applies the social identity approach (SIA) from sociology and social psychology, which understands social influence as the interaction of different groups with different levels of power (Tajfel and Turner 2004; Turner et al. 1994). On a psychological level, one aspect stabilizing existing power and influence structures between groups are prejudice. Prejudice can be understood as a preconceived opinion that is not based on reason or actual experience (Allport et al.

1954). A theory explaining potential ways to reduce prejudice is the contact hypothesis, which postulates that the interaction (contact) between members of different groups can reduce prejudice if appropriate conditions are present (Allport et al. 1954; Dixon et al. 2005). In addition, the contact hypothesis was expanded several times to indirect (Crisp and Turner 2009), negative forms (Paolini et al. 2010), and electronic (White et al. 2015) intergroup contact.

In our contemporary world, digital technologies can be understood as a transportation medium of attitudes and prejudice. A context in this regard with increasing popularity is video games played in real time over the internet. In 2017 more than 2.2 billion people worldwide played video games and the industry had an estimated global revenue of \$108.9 billion illustrating its societal meaning and function as a remarkable encounter of socialization (Newzoo 2017). Surprisingly, looking into existing information systems (IS) research it becomes apparent that no study up to now has used the contact hypothesis to explore the effects of intergroup contact in video games have on prejudice. The study at hand tries to take a first step to close this gap by using the example of sexism (e.g. prejudice based on a person's gender) and a holistic operationalization of intergroup contact (e.g. positive vs. negative and human vs. avatar) between females and males. Accordingly, our study is guided by the following research question.

RQ: What effects do different forms (positive and negative) of intergroup contact with human and avatar females have on sexism playing video games?

By answering our research question, we make several important contributions. First, it contributes to the literature on the social identity approach by explaining the effect of intergroup contact in the area of contemporary digital innovations. Second, it contributes to understand the positive and negative societal implications of these digital innovations. Third, it provides practice with the opportunity to learn more about societal impacts of video games, gain insights into potential ways to deal with prejudice, and target group specific consultations as drivers for social responsibility.

The paper at hand is organized as follows. First, the related work section provides an overview on the underlying theories and hypotheses of the study. Second, the applied research methodology is visualized. Finally, a short outlook on the impact of the findings is drawn.

Related Work

Social Identity and Social Influence

The understanding of the individual and the society within this study is based on the assumptions of the social identity approach (SIA) which can be used to explain intergroup behavior (Tajfel and Turner 2004). The central statement of the SIA is the assumption that the self-concept of an individual is a collection of beliefs about oneself referring to the characteristics defining an individual's own perception in a given situation (Myers 2012). The construction of the self-concept takes place using personal and social aspects of identity which are located on an interpersonal-intergroup continuum (Tajfel and Turner 2004). Personal identity refers to the individual and identifies them as different from others on a lower level of abstraction. Social identity identifies the individual as a member of a group and different from other groups on a higher level of abstraction. Within the SIA individuals strive for a positive self-concept, therefore they use comparisons on the level of individuals and groups aiming for maintaining or enhancing a positive self-concept attaining positive distinctiveness (McLean and Syed 2014). If an individual identifies as part of a group (ingroup), depersonalization and self-stereotyping occur (e.g. a higher salience of group norms compared with individual norms). Additionally, an individual perceives outgroups (e.g. a not identified group) rather homogenous, favors the ingroup, and derogates the outgroup (Tajfel and Turner 2004).

Looking at the intergroup end of the continuum of behavior, the social existence of individuals relates to social groups possessing different degrees of influence and power. Half a decade ago Kelman identified three broad varieties of social influence: 1) Compliance (e.g. agreement with others and keeping their dissenting opinions private), 2) identification (e.g. influence by someone who is liked and respected in the society), and 3) internalization (e.g. acceptance of a belief or behavior and agreement; Kelman 1958). Consulting relevant literature from social change, we use a distinction between social

minorities and social majorities as building blocks of our theoretical approach (Allport et al. 1954). Accordingly, social minorities have typically been defined as groups who are numerically infrequent, advocate an contradictory position, and have low power and influence (Moscovici 1976, 1985). Opposed to that social majorities are a larger group of individuals who have the power to reward and punish others with approval and disapproval (Moscovici 1976, 1985).

Table 1. Important Social Entities

Construct	Definition	Source
Self-concept	A collection of beliefs about oneself	Tajfel and Turner 2004
Personal identity	Refers to self-categories which define the individual as a unique person in terms of their individual differences from other persons.	Turner et al. 1992
Social identity	Refers to social categorizations of self and others defining the individual in terms of shared similarities.	Turner et al. 1992
Ingroup	A social group to which an individual psychologically identifies as being a member.	Tajfel and Turner 2004
Outgroup	Asocial group with which an individual does not identify.	Tajfel and Turner 2004
Minority	A group who is numerically infrequent, advocate an contradictory position, and have low power and influence.	Moscovici 1976, 1985
Majority	A larger group of individuals who have the power to reward and punish others with approval and disapproval.	Moscovici 1976, 1985

Prejudice in Video Games

Prejudice can be considered a mechanism influencing existing power and influence structures between different social groups in a society. They are defined as a affective feeling or cognitive belief, favorable or unfavorable, toward a person based solely on group membership not based on actual experience (Allport et al. 1954). For the course of this paper, we base our understanding of prejudice on two theoretical approaches. First, we use the integrated threat theory (ITT) as a basis of our understanding. The ITT assumes that outgroup prejudice and discrimination is caused when individuals perceive an outgroup to be threatening in some way, which relates to the assumptions of the SIA of ingroup favoritism and outgroup derogation (Stephan et al. 2000). The theory proposes four different classes of threats: 1) Realistic threats (e.g. to the political or economic power of the outgroup), 2) symbolic threats (e.g. based on value differences), 3) intergroup anxiety (e.g. during social interaction with the outgroup), and 4) negative stereotypes (e.g. of the outgroup). Second, we use social dominance theory, which is based on the SIA related assumption that societies are group-based hierarchies (Sidanius et al. 1996). Within the theory, dominant social groups create highly prejudiced "legitimizing myths" to provide moral and intellectual justification for their dominant position over other social groups and maintain these prejudiced societal hierarchies (Sidanius et al. 1996). Historically, some of the most commonplace prejudices are nationalism (Blackwell et al. 2008), sexual discrimination (Anderson 2010), and religious discrimination (Dovidio et al. 1997).

Looking at prejudice from the perspective of IS research the interplay of digital innovations (specifically video games) and prejudice has not been adequately addressed so far, which is surprising because of the wide dissemination and societal demand towards technology. One exemplary construct particular meaningful in the context of video games is sexism toward women. Outside the IS realms. research already looked at personality traits, demographic variables, and levels of gameplay as predictors for sexism (Fox and Tang 2014), illustrated a link between long-term exposure to sexist video games and sexist attitudes (Stermer and Burkley 2015), and indicated a relationship between video game consumption and sexism (Fox and Potocki 2016) but no study looked at the effects of intergroup contact individuals perceive as positive or negative as a predictor so far. Historically, sexism has been defined

as a prejudice, stereotyping, or discrimination, typically against women, on the basis of sex (Stevenson 2010). For the purpose of our study, we understand sexism as a multidimensional construct that encompasses two disjunctive sets of attitudes: 1) hostile sexism (e.g. the classic definition of sexism) and 2) benevolent sexism (e.g. viewing women stereotypically and in restricted roles but that are subjectively positive in feeling and also tend to elicit behaviors typically categorized as prosocial; Glick and Fiske 1996).

Table 2. Important Prejudice related Entities

Construct	Definition	Source
Prejudice	An feeling or belief, favorable or unfavorable, toward a person or thing based solely on group membership.	Allport et al. 1954
Sexism	Prejudice, stereotyping, or discrimination, typically against women, on the basis of sex.	Stevenson 2010

Intergroup Contact in Video Games

Research examining the association of different forms of intergroup contact mediated through digital innovations and prejudice toward women has not been investigated up to now. With our study we want to explore intergroup contact as a predictor of prejudice in the context of video games. We base our assumption on the contact hypothesis, which suggests that intergroup contact under appropriate conditions can effectively reduce prejudice and discrimination between majority and minority group members (Allport et al. 1954). The four different conditions necessary to reduce prejudice are: 1) Equal status (e.g. similar social and academic background between female and male players), 2) common goals (e.g. female and male players have the goal to win a game), 3) intergroup cooperation (e.g. female and male players have to cooperate to win a game), and 4) support of authority (e.g. female and male players have to acknowledge the video game developer as an authority).

Within the last decade different extensions of the contact hypothesis have been proposed. First, negative forms of intergroup contact appeared in the academic spotlight proposing the negative contact hypothesis, which assumes that intergroup contact can have more negative than positive effects on prejudice (Paolini et al. 2010). Second, indirect forms of intergroup contact were proposed which can have similar effects as direct intergroup contact on prejudice (Dovidio et al. 2011). Based on this, research investigated different forms of indirect intergroup contact: 1) Extended contact (e.g. if a member of a ingroup has a close relationship with a member of an outgroup; Wright et al. 1997), 2) imagined contact (e.g. imagination of positive contact with an outgroup member; Crisp and Turner 2009), and 3) electronic contact (e.g. contact based on text and/or video; White et al. 2015).

Research outside the IS realms already illustrated that video games can have an impact on prejudice when individuals cooperate but no study up to now explored dedicated impacts of different forms of intergroup contact in one study (Adachi et al. 2016). Based on the aforementioned assumptions and transferred to the context of video games, we postulate two different forms of intergroup contact with females in video games having the potential to influence prejudice: 1) Human intergroup contact (e.g. with other real females playing video games) and 2) avatar intergroup contact (e.g. with an artificial female avatar playing a video game). In most contemporary successful multiplayer video games, some form of cooperation between players is possible, which may facilitate positively experienced contact. This cooperation should then be perceived as positive. We expect that this effect arises for both avatar intergroup contact and human intergroup contact. Opposed to this, we expect complementary effects for negative contact experiences. Therefore, in case of hostile sexism, we propose the four subsequent hypotheses.

Hypothesis 1a: Positive human intergroup contact has a negative effect on hostile sexism.

Hypothesis 1b: Negative human intergroup contact has a positive effect on hostile sexism

Hypothesis 1c: Positive avatar intergroup contact has a negative effect on hostile sexism.

Hypothesis 1d: Negative avatar intergroup contact has a positive effect on hostile sexism.

In case of benevolent sexism, we formulate open hypotheses because the influence of contact on benevolent sexism can increase with extended contact (e.g., de Lemus et al. 2010).

Hypothesis 2a: Positive human intergroup contact has an effect on benevolent sexism.

Hypothesis 2b: Negative human intergroup contact has an effect on benevolent sexism.

Hypothesis 2c: Positive avatar intergroup contact has an effect on benevolent sexism.

Hypothesis 2d: Negative avatar intergroup contact has an effect on benevolent sexism.

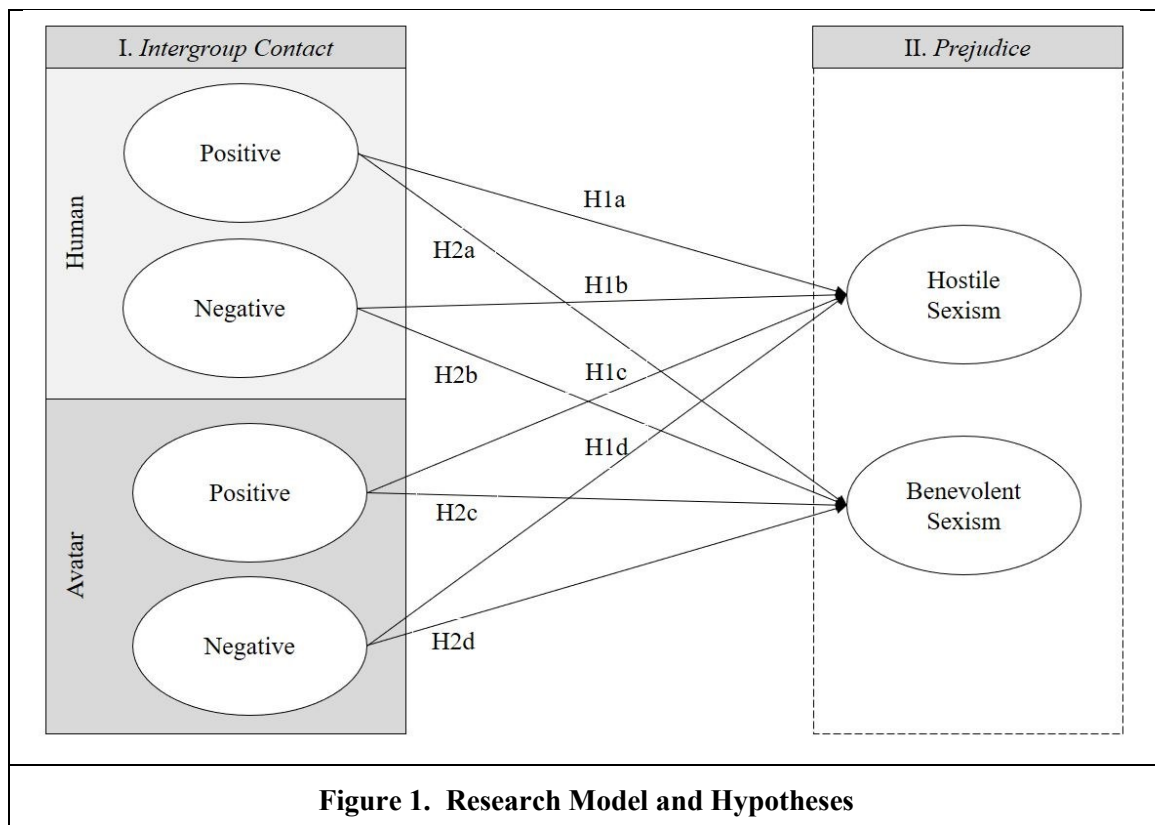
Table 3. Contact related Entities

Construct	Definition	Source
Contact hypothesis	Intergroup contact under appropriate conditions can effectively reduce prejudice.	Allport et al. 1954
Electronic intergroup contact	Text-based and video-based intergroup contact playing video games.	White et al. 2015
Human intergroup contact	Intergroup contact with other real females.	own definition
Avatar intergroup contact	Intergroup contact with an artificial female avatar.	own definition

Methodological approach

Research Design and Hypotheses

To answer our research question, we plan on using a cross-sectional approach to compare different forms of intergroup contact on prejudice. Therefore, we will use an online survey to collect self-reported data and covariance based statistics to calculate the quantitative results. The subsequent Figure 1 illustrates our research model and the specified hypotheses.



Participants

In order to ensure conclusive results, we will survey players from the most successful video games at the moment. Therefore, in order to acquire a significant amount of respondents, we will use different channels (community boards, social media, gatekeepers) to disseminate the link to our study.

Data Analysis

To test the hypotheses of our study, we aim to make use of different statistical tools. First, we will use regressions to protect the data from unwanted effects of demographic variables and covariates. Second, we plan on applying co-variance based path modeling to compare the different forms of intergroup contact explaining sexism.

Measurements

To measure the constructs of interest, we plan to make use of empirically validated scales adjusted to the context of prejudice in video games evaluating self-reports of video game players.

Dependent Variable

To measure prejudice in our study, we will use a scale comprising the two dimensions' hostile sexism (e.g. "Most women interpret innocent remarks or acts as being sexist") and benevolent sexism (e.g. "Men are complete without women") with eleven items each (Glick and Fiske 1996).

Independent Variable

To measure intergroup contact in our study, we plan to use an adapted item from literature for positive (e.g. "How often do you have positive interactions with female players?") and negative (e.g. "How often do you have negative interactions with female players?") human and positive (e.g. "How often do you have positive contact experiences with female avatars/champions?") and negative (e.g. "How often do you have negative contact experiences with female avatars/champions?") avatar contact (Barlow et al. 2012).

Demographic and control variables

Furthermore, we want to include several demographics (e.g., age, gender, education, country, origin) and control variables (e.g., frequency and experience of play, emotions towards the outgroup, favorability and liking, stereotypes, motivation to control prejudice) in order to further prevent unwanted confounding effects on the results and to have the chance to do some post-hoc analysis comparing different groups. Since we will use self-reports for the majority of measurements, we additionally plan to include different tools to capture social desirability of respondents and illuminate resulting confounds as a result. In doing so, we plan to carefully use different data screening techniques (e.g., bogus items, semantic antonyms, response time, personal reliability), which have already shown that they can significantly increase the quality of collected digital data (DeSimone et al. 2015).

Outlook

The short paper at hand proposes a first approach to explore different forms of intergroup contact as predictors of prejudice in the context of video games. Accordingly, different forms of intergroup contact (positive, negative, human, avatar) can be compared in relation to their societal impact. Future studies can build on the findings of the paper at hand, integrate them within their own frameworks, and confirm empirical evidence for certain relationships by using different methods (e.g., cross-sectional and longitudinal laboratory and field experiments to test causality). We expect the quantitative study to deliver insights contributing to both theory (better understanding of the interplay of different forms of intergroup contact) and practice (the opportunity to better handle prejudice related effects in video games).

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