

Sounds Good to Me: Effects of Photo and Voice Profiles on Gaming Partner Choice

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ABSTRACT

In an empirical study we investigated how matchmaking for online gaming platforms could benefit from additional implicit information conveyed in profiles that include photos or voice recordings. We used 150 real online gamer profiles (50 text-only, 50 text & photo, 50 text & voice) to elicit gaming partner preferences from 267 online gamers. We found profiles with photos to lead to lower overall preference, indicating that people used them to reject potential partners. Voice recordings did not reduce overall preference but gave participants relevant information for gaming partner choice. We close with recommendations for the design of online profiles.

Categories and Subject Descriptors

H.5.3 Group and Organization Interfaces: Collaborative Computing; Computer-supported cooperative work; Evaluation/methodology, J.7 Computers in Other Systems: Consumer Products

General Terms

Design, Experimentation, Human Factors.

Keywords

Games, Matchmaking, Social Computing, Profiles, Voice, Photos

1. INTRODUCTION

Online gaming is rapidly evolving both in popularity [4] and with regard to the functionality offered by the latest gaming consoles. Voice channels for live in-game communications, for example, are a common feature of the latest systems. Furthermore, these systems can now be synced with other online platforms such as MSN [7].

Despite this increasing availability of rich channels and detailed profile information, current matchmaking systems are largely based on few attributes such as skill level. This lack of

individuating information is often cited as one of the attractions of online interactions, as it liberates users from stereotyping [3]. However, it also stands in stark contrast to how people navigate social spaces offline. Groups or clubs are joined based on location and access rules that increase the likelihood of meeting like-minded others. Once we encounter others face-to-face, we carefully judge whom to interact with by gathering information about them from their appearance (e.g. age, socio-economic status), their voice, and their behavior [5].

This observation motivated us to explore how profiles that convey personal information implicitly affect participants' choices of preferred gaming partners. We decided to investigate *text* profiles, *text & photo* profiles, and *text & voice* profiles. Photos are a standard feature of many online profiles and voice recordings are a natural extension to player profiles in existing voice-enabled platforms.

In this paper we first give a brief overview on the background and relevant literature for our approach. The main section outlines a study conducted with an experimental matchmaking system that allowed players to create profiles and to choose gaming partners. In this short paper we focus on the effects of photos and voice on gaming partner preference. A detailed analysis of the effects of explicit and implicit profile attributes on gaming partner choice will be reported in [10]. We conclude with recommendations for the design of online gaming matchmaking systems.

2. BACKGROUND

The effect of access to personal background information prior to online encounters has been studied using social dilemma tasks [1], [2], [8], [14]. In these studies, access to static text-based personal information, which is commonly given in profiles, had no effect on trust and cooperation. However, they provide evidence that additional personal information given implicitly in photos or audio channels can effect subsequent interactions.

2.1 Photos

Zheng et al. [14] found that participants who saw photos of each other prior to interaction were marginally more cooperative compared to those that had no access to personal information. While Zheng et al. did not investigate online gaming matchmaking; their findings allow the prediction that personal information conveyed in photos prior to interactions will lead to a

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more positive evaluation of potential gaming partners. There is, however, also evidence for a contrasting prediction. Walther et al. [13] found that photos can dampen subjective affinity in virtual groups in the long-term. His concept of *hyperpersonal interaction* [12] suggests that exposure to photos can reduce positive projections people may have about others in the absence of such individuating information. Similarly, SIDE [9] theory suggests additional individuating information in online communications may either accentuate individual or social identity – depending on the context of the interaction.

Photos allow people to infer a multitude of personal attributes, such as socio-economic status or attractiveness, that are not given explicitly in text profiles. Hence, they may result in better-informed decisions about whom to play with and thereby not in more positive, but in more differentiated responses.

2.2 Voice Recording

Many studies that investigated the effect of voice communications researched the use of a voice channel *during* interactions in social dilemma tasks [1], [2], [8]. Overall, these studies found that the voice channel increased trust and cooperation among participants. However, there is anecdotal evidence that these findings may not transfer to in-game communications on voice-enabled consoles, where they are sometimes used for aggressive ‘trash-talking’ [6]. The effects of *pre-recorded* voice statements that form part of profile information have, to our knowledge, not been researched. As indicated above, they can be easily integrated in voice-enabled online gaming consoles. As such recordings also provide additional implicit information that is not commonly expressed in explicit profile attributes (e.g. provenance, educational background), they may also result in better-informed decisions than text-only profiles.

2.3 Research Questions

Our research question was to assess whether a photo or voice recording has a meaningful impact on gaming partner choices when included with a text-only profile. The existing literature allows two predictions we hoped to tease apart: (1) photo and voice profiles increase trust and preference for other players or (2) photos and voice profiles lead to more differentiated and confident choices when compared to standard text-only profiles.

3. METHOD

3.1 Approach and Design

The study involved several steps. First, a set of real gamer profiles were created to use as stimuli. Participants were randomly assigned to either a *text-only* profile, *text & photo* profile, or *text & voice* statement condition. Profile media condition was thus our between-subjects factor. Second, the resulting profiles were coded on explicit and implicit dimensions (e.g. attractiveness or aggressiveness). Details of this analysis will be reported separately in [10]. Finally, a group of gamers rated the extent to which they would like to play with the players portrayed in their profiles. Our hope was that this represents a direct mapping of the actual matchmaking process in which a system would present likely matches based on key aspects of players’ profiles, and users would select a partner from that set of players.

For this study we focused on players of the Xbox Live game MechAssault. We chose Xbox Live as the domain for our research as it is a platform with a rapidly growing gamer

community [4] that exemplifies future systems in its use of rich modalities. MechAssault is one of the most popular games on this platform.

3.2 Material

3.2.1 Profile Attributes

We decided to include profile attributes that were gaming-specific as well as those that captured details about players’ personal background. To define explicit gaming-specific attributes we conducted qualitative interviews with 7 gamers and a review of gaming community sites such as Gamertag.com. The explicit personal attributes we picked reflected those that are commonly available at online community sites such as MSN or Friendster and included age, main leisure activity, and occupation. Figure 1 gives an overview on all profile attributes.

Gaming Information	
GamerTag	will
Currently, I play Xbox Live for	>5 up to 6 h per week
Currently, I play Mechassault for	>3 up to 4 h per week
Preferred Game Type	Team Last Man Standing
Preffered Mission	Hell's Kitchen
Preferred 'Mech	Cougar
Skill level	Beginner 1 2 3 4 5 6 7 Expert
Gaming Style	Play for fun 1 2 3 4 5 6 7 Play to win
Gaming Personality	Nice 1 2 3 4 5 6 7 Evil
I like to trash-talk	Not at all 1 2 3 4 5 6 7 Extremely so
I like to use voice-masking	Not at all 1 2 3 4 5 6 7 Extremely so

Personal Information	
Age	26-35
Gender	Male
State	Washington
Occupation	Engineering
Education	More than 4 years college
Main Leisure Activity	Events (Cultural/Sports)
Home State	New York
Photo	

Figure 1. Practice profile in the photo condition.

3.2.2 Creating Stimulus Profiles

We sent study invitations through email to 9309 gamers in the US who had played MechAssault online within the previous year. We asked participants to visit a website we had set up and create personal profiles for themselves. As an incentive for creating a profile, we entered participants into a sweepstakes to win software titles. Participants were randomly assigned to one of the three media profile conditions. Participants in the photo condition were instructed to upload a portrait photo of themselves. Those in the voice condition were asked to call a number and leave their screen name and a one-sentence statement. For both conditions,

we asked for a statement or photo that “will help other players when deciding whom to play MechAssault with”. From the profiles that were completed and approved for inclusion in this study we randomly selected 50 within each condition as stimuli for the main stage of the study.

3.3 Participants

For the main part of the study we invited 516 participants who had submitted a profile to rate how much they would like to play with other gamers based on those gamers’ profiles. We entered participants in this stage in a second sweepstakes. Participants rated profiles in the media condition (text, photo, or voice) they had initially been assigned to when they created their own profile. The 267 participants that submitted a complete response set to this stage were included in the analysis. Out of these, 83 participants saw text-only profiles, 91 saw text & photo profiles, and 93 saw text & voice profiles. These participants ranged from 18 to 71 in age ($M = 29.7$, $SD = 8.4$). The majority was male (96%), Caucasian (72%) and had at least 2 years of college (66%).

3.4 Measures

The main question we asked for each profile was ‘How much would you like to play MechAssault with this player?’ (Q1). To disambiguate between personal preference and preference as a gaming partner, we also asked whether the participant would enjoy a conversation with the gamer (Q2) and whether they would expect a game with him to be satisfying (Q3). Finally we asked how similar the participant perceived the other gamer to be to himself (Q4). After participants had rated all profiles in their condition we asked them how confident they were about their ratings overall, and individually for each rating question (Q1-Q4). We also asked them to what extent they felt they could trust other players. All responses were recorded on 7-point Likert scales (where 1 = *not at all* and 7 = *extremely so*). In a final open-ended question we asked participants which information they cared about when deciding whom to play with.

3.5 Procedure

Participants logged in to the study website to view profiles and give their ratings. Those in the voice condition had to enter a code word given in an audio file to ensure that their computer was set up to play the voice recordings. All participants then rated two practice profiles to get familiar with the experimental system. Subsequently, they rated all 50 profiles in their condition, one by one in randomized order. Participants whose profile had been selected as stimulus only rated 49 profiles. Participants could look at and rate each profile only once. Voice profiles contained a speaker icon that played the voice recording on mouse-over. Ratings for voice profiles could only be submitted after the voice recording had been played.

4. RESULTS

4.1.1 Absolute Preference

In the introduction we discussed research findings that suggested that rich media such as photo or voice may result in higher levels of trust and preference. Contrary to this prediction, participants gave significantly lower preference responses to the profiles with photos when compared to text profiles ($F(1, 171) = 8.26$, $p = .01$; see Figure 2). They also expected a conversation to be less enjoyable ($F(1, 171) = 7.18$, $p = .01$) and they expected a game

to be less satisfying ($F(1, 171) = 7.34$, $p = .01$). We did not find a main effect for comparisons between the voice and the text conditions.

We also did not find a difference between conditions for our final questions assessing participants’ overall trust and confidence. The mean trust rating given was 4.8 ($SD = 1.32$) and the mean overall confidence rating was 5.7 ($SD = 0.95$) on a 7-point scale.

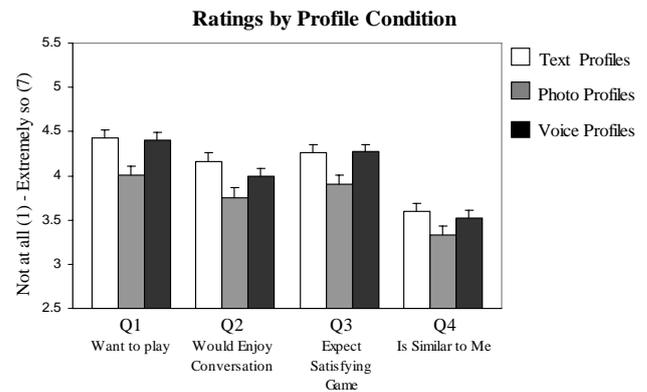


Figure 2. Photo profiles were consistently rated lower.

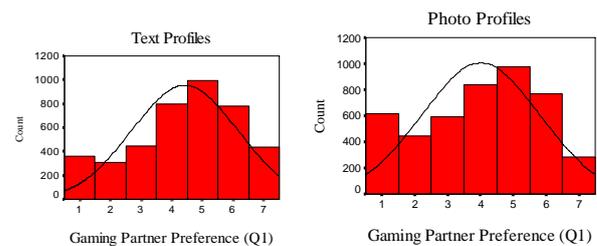


Figure 3. Photo profiles show a peak for negative responses (1 = I do not at all want to play with this gamer).

4.1.2 Variability of Preference Responses

To investigate whether rich media made participants more differentiating in their choices, we created a measure for the variability of a participant’s responses. For each participant we calculated the mean of the standard deviations of his responses to the profile rating questions (Q1-Q4). A high mean standard deviation indicates high variability in responses to the four questions about each profile. Planned comparisons showed a marginally higher variability in ratings for voice profiles ($M = 1.53$, $SD = 0.38$) than text only profiles ($M = 1.40$, $SD = 0.43$; $F(1, 173) = 5.52$, $p = .02$). Participants’ variability of responses did not differ between the text and the photo condition ($F(1, 171) = 0.05$, *ns*). However, participants showed a clearly higher frequency of extreme negative responses (1 = *I do not at all want to play with this gamer*) in the photo condition (Figure 3).

5. DISCUSSION

The prediction that rich media lead to higher preferences is not supported by our findings. To the contrary, profiles with photos were less preferred than other types of profiles, while voice profiles were, overall, as preferred as text-only profiles. Our findings thus provide support for Walther’s [12] concept of hyperpersonal interaction: photos can break positive projections players may have in their absence. Compared to the text profiles,

the distribution of responses for the photo profiles shows a peak for very negative responses. Thus, in a gaming context photos appear to act as a filter: they help players to decide who they clearly do not like. This benefit, however, appears to come at the cost of a collective disillusionment with the general gamer population and thus makes the inclusion of photos a risky strategy for organizations that provide online gaming platforms. Relating this result to SIDE concepts, our study provides support for the notion that gaming communities, in the absence of individuating visual information, can be subject to positive stereotyping.

We found a different pattern of responses for profiles with voice recordings. Participants in this condition did not give lower overall ratings than those that saw text profiles. However, further analyses showed that voice profiles had a marginally higher standard deviation in the distribution of individuals' gaming partner preferences. This finding gives some indication that voice recordings lead to more differentiated decisions, without introducing a negative bias. Unlike photos, voice recordings can easily convey information that is relevant to the game: many participants used the voice recordings to state which game they prefer to play, or whether they are a team player. Some also used the voice statements to enact their in-game *alter ego* by threatening others, or showing off their skills. Thus, the voice recordings allowed participants to sample other players' expected in-game behavior prior to interacting with them. The photos in contrast were mostly not specifically adapted to the situation and did not carry any specific information about expected in-game behavior. One participant put it as follows:

"The voice clip was most helpful. I could tell right away which people seemed like they'd be fun to play with and which people would not."

6. CONCLUSIONS

Comparing the effect of text-only, text & photo, and text & voice recording profiles on gaming partner preference, we found that photos resulted in a peak for very negative responses, indicating that gamers use them to 'filter out' specific other players. The overall result is that profiles with photos are rated—on average—more negatively than profiles with text only or with voice statements. Our findings thus give support to Walther's concept of hyperpersonal interaction. For practitioners this indicates that the use of photo profiles could be dangerous, as they can reduce users' appreciation of the overall gamer population. Whether this finding transfers to gamer populations that are less homogenous than that of MechAssault will have to be established in future studies.

Pre-recorded voice statements, which are not yet widely used in online profiles, on the other hand conveyed many implicit attributes that are relevant for a differentiated preference response. In addition they did not reduce overall preference. As voice recordings can be easily integrated with voice-enabled gaming platforms, we see them as the most promising approach. Future studies will have to test how these findings transfer to other domains of profile-based online interaction (e.g. online support or online dating systems).

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