Fast track report

Why are online games so self-involving: A social identity analysis of massively multiplayer online role-playing games

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Abstract

This article investigates the ways in which players of massively multiplayer online role-playing games (MMORPGs) internalize being a player into their self-concept. In accordance with the social identity framework, we assume that being a player and being a member of a guild within the game can both shape the social identity of members. In two studies, we survey players inside or outside the MMORPG. Players are interviewed either at an interguild comparison level or at the more inclusive level of MMORPG players. Study 1 (n = 84) reveals favoritism for the in-group guild in a within-game context, and study 2 (n = 200) shows that valuation of and identification with the in-group are moderated by the interview context and the level of category inclusion: Inside the game, the guild is more valued and identification is emphasized. In contrast, valuation of and identification with MMORPG players is not influenced by the interview context. Together, by examining both valuation and identification process, this research reveals that playing online games may be self-involving because being a player, but also being a member of a guild, directly contribute to the social identity. Copyright © 2015 John Wiley & Sons, Ltd.

INTRODUCTION

Massively multiplayer online role-playing games (MMORPGs) are virtual worlds—often fantasy or science fiction-themed—in which thousands of players interact with each other through the use of avatars (i.e. virtual, customizable characters, Meadows, 2008). Although avatars induce a form of anonymity, MMORPGs provide highly involving social experiences (Cole & Griffiths, 2007; Ducheneaut & Yee, 2013) in which cooperation and mutual assistance are essential. According to Ang, Zaphiris, and Mahmood (2007), "MMORPGs are created to encourage long-term relationships among the players through the features that support the formation of in-game communities" (p. 168). Thus, players are allowed to form guilds, that is, formal groups created within the virtual environment that can include several dozen members or more. Guild membership is visible through a label displayed with the name of the avatar and sometimes through emblems or costumes worn by the avatar.

The social dimension and immersive experience are chief motivations for the use of MMORPGs (Yee, 2006; Yee, Ducheneaut, & Nelson, 2012): They provide a new social environment enabling players to get away from everyday reality (Nardi & Harris, 2006). In that respect, guilds provide a heuristic field of study for social psychology: They form a new type of group, neither real nor tangible, neither ordinary nor minimal. Guilds emerge from an imaginary environment setup by a software program, and their members are brought together primarily through computers. Membership in virtual groups is widespread in contemporary youth culture, but the nature of the guild remains understudied and ill-defined in social psychological terms. In addition to these basic and applied interests, anonymity in MMORPGs and the reduction of real personal cues are likely to influence the processes of guild membership.

Although visual anonymity in computer-mediated communication (CMC) has been seen as conducive to social loss and reduction of group pressure (Kiesler, Siegel, & Mcguire, 1984; Sproull & Kiesler, 1986), it may actually foster the emergence of group identity and strengthen its influence (Postmes, Spears, & Lea, 1998). This paradox can be explained in light of *social identity perspective*. Social identity theory (Tajfel & Turner, 1979) defines the social identity as a part of self-concept linked to group membership. Moreover, self-categorization theory (SCT; Turner, Hogg, Oakes, Reicher, & Wetherell, 1987) suggests that, depending on the situation, the individual will feel more or less part of a given social category. The self is viewed as a variable, multifaceted cognitive structure (i.e. different self-categorizations at different levels of inclusion). As a function of the context (*accessibility* and *fit*), social categories are internalized to define the self and individuals see themselves and the others not on the basis of personal characteristics but as representatives of salient groups (depersonalization process; Turner, 1984; Turner et al., 1987).

The *social identity model of deindividuation effects* (SIDE; Reicher, Spears, & Postmes, 1995; Spears & Lea, 1992, 1994)

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extends these conceptions to CMC and posits that the scarcity of individuating information combined to a salient social identity enhances group salience. According to SIDE, the anonymity of others to self leads to depersonalization: Because personal specificities of others are not perceived, individuals reason on the basis of social categories and see themselves and others as prototypical group members. This *cognitive effect* fosters group norms, social attraction to group members, stereotypes, and in-group favoritism (Postmes et al., 1998). Moreover, the lack of identifiability of self to others leads to a *strategic effect*, which increases freedom in the expression of social identities and enables behaviors matching the salient identity even if these behaviors are not in line with norms of dominant out-groups (Klein, Spears, & Reicher, 2007; Spears & Lea, 1994).

In accordance with SCT and the SIDE model, the guild could be a particularly salient group for identification in the social context of MMORPGs: Real-life idiosyncratic attributes are masked (anonymity and use of avatars), and group membership cues are visible (guild names, costumes). Moreover, users may focus on their guild membership, feel a sense of remote presence and immersion into the group (Rogers & Lea, 2005), and engage in an interguild level of self-categorization. Prior research has shown that such groups can be highly involving. Utz (2003) showed that virtual groups within *multi-user dungeons* (MUDs; text-based precursors of MMORPGs) display high levels of social identification and in-group favoritism. These results are, however, not directly transposable to MMORPGs: The players are different (the population playing MMORPGs is more heterogeneous), and Utz's study focused on the superordinate in-group of "MUD players" instead of on the subgroup level of guilds. We believe that it is important to differentiate this subgroup level because guilds are groups that are created and exist only in the virtual environment, based on rules and criteria that are internal to the game and have no connection to real life social considerations. To our knowledge, no prior research has studied social identity processes applied to modern MMORPGs and their guilds.

The aim of this article is to understand whether the guild provides a self-categorization basis upon which identity processes (in-group favoritism, group identification) develop. To do this, we investigated in a relatively non-directive way how the in-group and the out-group are connected to the self.

We also wish to observe how membership to the guild and to the more inclusive "player" category—which necessarily includes various guilds—overlap. If users see themselves primarily as players, interguild membership and the social constructs developed in the MMORPG will be minimally relevant to them. Conversely, if users see themselves as guild members, we wish to study how in-game identity transfers to contexts outside the game. In order to address these issues, the studies made use of an identification measure developed by Zavalloni and Louis-Guérin (1984) that first assesses the stereotype of in-group and out-group and then assesses overlap of these stereotypical attributes with the self. This measure is quite different from existing measures of social identification that are widely used in the mainstream social identity literature (e.g. Leach et al., 2008, for an overview) because it assesses social identity content. We prefer to use this alternative measure because it taps more directly into the variables of self-

in-group and self-out-group overlap that are central to the current research.

The first study investigated interguild perception and guild favoritism by collecting the participants' responses directly within the MMORPG via text interviews. The second study manipulated both the interview context and the level of inclusion to examine the relation between guild and players' membership.

STUDY 1: GUILD MEMBERSHIP AND IN-GROUP FAVORITISM

Hypothesis H1 assumes that players interviewed in an MMORPG would give more positive responses when describing members of their own guild (in-group favoritism) than when describing members of other guilds (out-group). They should also mention more negative elements when describing the out-group than when describing the in-group.

Method

Participants

Eighty-four participants (mean age = 22.6 years old; $SD = 4.8$), all players of the MMORPG Dofus (published by Ankama) and members of various guilds, took part in this study. They were randomly approached online in a popular town square with the following message: "Hello, we're conducting a study on Dofus players; would you like to answer a few questions?" Approximately 75% of players agreed and participated in a 10-min text interview through the internal chat.

Procedure

In the first phase, 34 players were asked to provide five words to describe their guild and five words to describe other players belonging to other guilds. They also had to specify whether each term was positive, negative or neutral. We collected the most frequently cited words to describe the in-group (likeable 87%, nice 48%, supportive 38%, friendly 32%, funny 26%) and the out-group (likeable 56%, mean 38%, rude 26%, aggressive 14%, scammers 14%, competitive 11%). In line with hypothesis H1, these terms were all valenced: positively for the in-group and negatively for the out-group (except for the word "likeable" that positively valenced but was mentioned less often than for the in-group).

In the second phase, 50 participants filled out a questionnaire using the 10 previously mentioned terms with response scales ranging from 1 = "strongly disagree" to 4 = "strongly agree". Participants filled in two versions of the questionnaire (in-group, out-group) in a counterbalanced order.

Results

The attribution scores were processed with a 2 (target: in-group versus out-group) × 2 (valence: positive versus negative) ANOVA, all factors being within-subject. The results show a main effect of the target factor, $F(1, 49) = 10.88$, $p < .01$,

Table 1. Mean attribution scores for each item according to target (standard deviations in parentheses)

		In-group	Out-group
Positive items	Likeable	3.90 (0.30)	2.42 (0.94)
	Nice	3.92 (0.27)	2.32 (0.97)
	Supportive	3.38 (0.85)	2.18 (1.10)
	Friendly	3.82 (0.38)	2.54 (1.07)
	Funny	3.34 (0.91)	2.18 (1.15)
	Average	3.67 (0.66)	2.32 (1.05)
Negative items	Mean	1.12 (0.32)	3.10 (0.86)
	Rude	1.46 (0.93)	3.28 (0.88)
	Aggressive	1.14 (0.40)	3.00 (1.03)
	Scammers	1.34 (0.74)	3.52 (0.81)
	Competitive	2.40 (1.21)	3.34 (0.93)
	Average	1.49 (0.91)	3.24 (0.91)

$\eta_p^2 = .18$ with attribution scores higher for the out-group ($M = 2.78$; $SD = 1.09$) than for the in-group ($M = 2.58$; $SD = 1.35$), as well as a main effect of the valence factor, $F(1, 49) = 57.66$, $p < .001$, $\eta_p^2 = .54$, with higher scores for the positive items ($M = 3.00$; $SD = 1.10$) than for the negative items ($M = 2.37$; $SD = 1.27$). In agreement with hypothesis H1, there was a significant interaction effect between the target and valence factors, $F(1, 49) = 296.31$, $p < .001$, $\eta_p^2 = .85$, with positive items more readily attributed to the in-group, $F(1, 49) = 140.74$, $p < .001$, and negative items to the out-group, $F(1, 49) = 275.88$, $p < .001$ (see Table 1).

Discussion

In accordance with H1, this study shows in-group favoritism related to guild membership for Dofus players. Participants mostly relied on negative items to distinguish between the in-group and the out-group: Positive items were not completely denied to the out-group whereas negative items were scarcely attributed to the in-group—except for the term "competitive" that may have been reinterpreted positively by some players. This is the reason why the positive items and the out-group obtained overall higher attribution scores.

This study revealed an in-group favoritism comparable with that previously observed in online groups (e.g. Postmes, Spears, & Lea, 2002; Utz, 2003). However, in our study, membership was based on subgroups within the MMORPGs: Despite its virtual nature, the guild appears to make a strong contribution to the social identity of participants.

STUDY 2: GUILD, MODERATING CONTEXT AND INCLUSION LEVEL

Considering that guild membership is inherent to the MMORPG context, the second study aimed to examine the influence of the context on the salience of this affiliation. In other words, we investigated whether identification with the guild can also be observed outside of the game. Because the guild is generally used only during the game, its relative accessibility (past game experiences, usefulness, player motivations and needs) and fit (according to SCT's principle of *metacontrast*

and the cognitive effects predicted by SIDE) should be increased inside the game.

If the relevance of the guild is restricted to the social context in which it acquires significance and usefulness, it seems relevant to compare this group with the more inclusive level of players, which should be less context-sensitive. Indeed, the more inclusive level of players versus non-players refers to affiliations that are most relevant outside the MMORPG context.

Hypotheses

Firstly, this study aims to verify guild favoritism (hypothesis H1) in another and more popular game: World of Warcraft. At the guild inclusion level, we also expected an effect of the context: Value of and identification with the guild should be stronger inside than outside the game (hypothesis H2).

Group perceptions at the superordinate level of players have not been created in a gaming practice in a virtual environment, contrary to the subordinate level of guilds, which is intrinsically linked to the game environment. Therefore, we expect the influence of the context (inside versus outside of the game) to be greater for someone's own guild than for the in-group of players (hypothesis H3).

Finally, the MMORPG as an interview context should impact the choice and valence of words produced by the players. In accordance with the strategic effect of SIDE, the context of the MMORPG should increase the contrast with the majority out-group of non-players, which should be less valued inside the MMORPG than outside the game (hypothesis H4).

Method

Participants

Two hundred participants (mean age = 24.3 years old; $SD = 5.7$), all users of the MMORPG World of Warcraft (published by Blizzard Entertainment) and members of various guilds, participated in this study. The design of the study was a 2 (interview context: within MMORPG versus face to face) × 2 (nature of comparison: intragroup versus intergroup) × 2 (target: in-group versus out-group) orthogonal design, with target ratings as a within-subject factor.

Procedure

We chose to study World of Warcraft, which is one of the most popular MMORPGs, in order to find a sufficient number of players in game rooms for face-to-face interviews. World of Warcraft shares the same basic characteristics as Dofus but provides a 3D environment and has a larger population of players (about 8 million active accounts in 2014). We also wished to generalize study 1 results to another very popular game after Dofus.

To measure distances between self, in-group and out-group (Deschamps & Moliner, 2008; Haddock & Zanna, 1998), we used a technique based on the psychosocial identity inventory (Zavalloni & Louis-Guérin, 1984). The participants had to characterize the in-group (and the out-group in a counterbalanced order) with five terms, rate their valence on a 3-point scale ($-1 =$ negative, $0 =$ neutral, $1 =$ positive) and

indicate whether these terms applied to him/her personally (identification index) on a 3-point scale (0 = never applies to me, 1 = sometimes, 2 = often). We therefore obtained four scores for each participant: in-group and out-group valence (−5 to +5), in-group and out-group identification (0 to 10).

This procedure was performed at two levels of comparison: intragroup and intergroup. At the intragroup level, half of the participants ($n = 100$) rated two targets: the own guild (in-group) and other guilds (out-group). At the intergroup level, the other half ($n = 100$) rated targets at a more inclusive level: game players (in-group) and non-players (out-group). This procedure allows us to assess and compare two types of valence and identification: with the subordinate in-group of guilds and with the superordinate one of game players.

To measure the impact of the context, the entire procedure was replicated in two interview contexts (between-subject context factor: MMORPG versus face to face). Half of the participants ($n = 100$) were interviewed vocally within the game World of Warcraft in frequented streets of four capital cities (using Mumble vocal communication software for gaming). The other half of participants ($n = 100$) was interviewed face to face in a game room.

The players were approached in the same way as in study 1: 100% of players agreed to participate in a face-to-face interview, and the acceptance rate in the MMORPG corresponded approximately to 75%. In all cases, the interview lasted about 15 min.

Results

Valence and identification scores were processed with a 2 (context: MMORPG versus face to face) × 2 (target: in-group versus out-group) × 2 (comparison: intragroup versus intergroup) ANOVA.

Valence Scores

The ANOVA performed on the valence scores (Figure 1) shows a main effect of the target, $F(1, 196) = 109.84$, $p < .001$, $\eta_p^2 = .36$ with in-group valence scores significantly higher than those of the out-group; a main effect of comparison, $F(1, 196) = 7.81$, $p < .01$, $\eta_p^2 = .04$ with higher valence scores in intragroup comparisons than in intergroup comparisons; and no main effect of the context, $F(1, 196) = 0.03$, $p = .84$.

To test H1, we examined the effect of the target (in-group versus out-group) at the intragroup comparison level and found it to be significant $F(1, 98) = 131.83$, $p < .001$, $\eta_p^2 = .57$, with in-group valence scores for the own guild ($M = 3.07$; $SD = 2.08$) significantly higher than out-group valence scores for other guilds ($M = -0.01$; $SD = 2.24$).

To test H2 and H3, we focused on in-group valence scores and observed a significant interaction between the context and comparison factors, $F(1, 196) = 10.27$, $p < .01$, $\eta_p^2 = .05$. Simple effects showed that in-group valence scores for the own guild were higher in the MMORPG ($M = 4.06$; $SD = 1.67$) than in the face-to-face condition ($M = 2.08$; $SD = 1.98$), $F(1, 196) = 21.40$, $p < .001$, $\eta_p^2 = .10$, which is consistent with H2. In contrast, and consistent with H3, no effect of context was observed for valence scores when the group of players was the focal in-group ($M = 1.48$; $SD = 2.25$ vs $M = 1.44$; $SD = 2.54$), $F(1, 196) = 0.008$, $p = .92$, $\eta_p^2 = .00$.

Finally, H4 was tested by examining simple effects on the out-group valence scores: Non-players' valence scores were significantly lower in the MMORPG ($M = -0.54$; $SD = 1.8$) than in the face-to-face context ($M = 1.2$; $SD = 2.24$), $F(1, 196) = 16.38$, $p < .001$, $\eta_p^2 = .08$.

Identification Scores

The ANOVA performed on the identification scores (Figure 2) shows a target main effect, $F(1, 196) = 218.07$, $p < .001$, $\eta_p^2 = .58$ with in-group scores significantly higher than out-group scores; a main effect of comparison, $F(1, 196) = 15.21$, $p < .001$, $\eta_p^2 = .07$ with higher identification scores at the intragroup than the intergroup comparison level; and no main effect of the context, $F(1, 196) = 2.13$, $p = .14$.

At the intragroup comparison level, the identification scores showed the same pattern as the valence scores, with a main effect of target, $F(1, 98) = 103.63$, $p < .001$, $\eta_p^2 = .51$, and in-group (own guild) identification scores ($M = 7.18$; $SD = 2.21$)
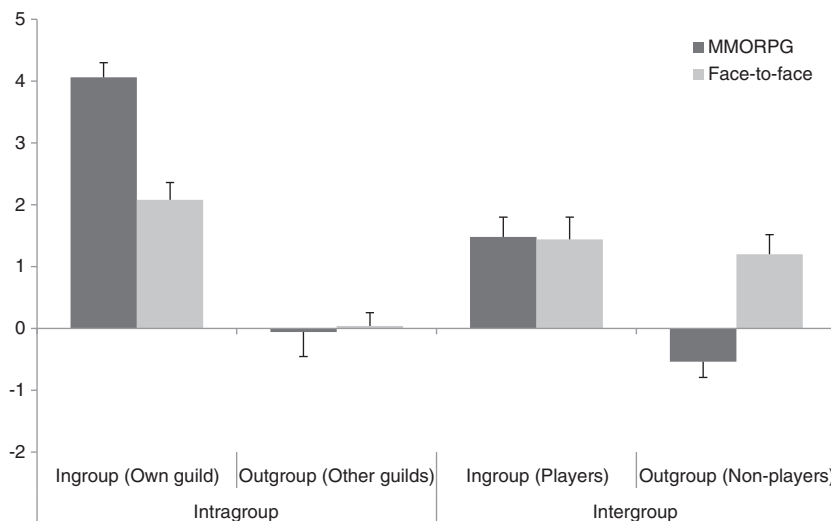

Figure 1. Valence scores and standard errors as a function of the context, target and comparison level, study 2
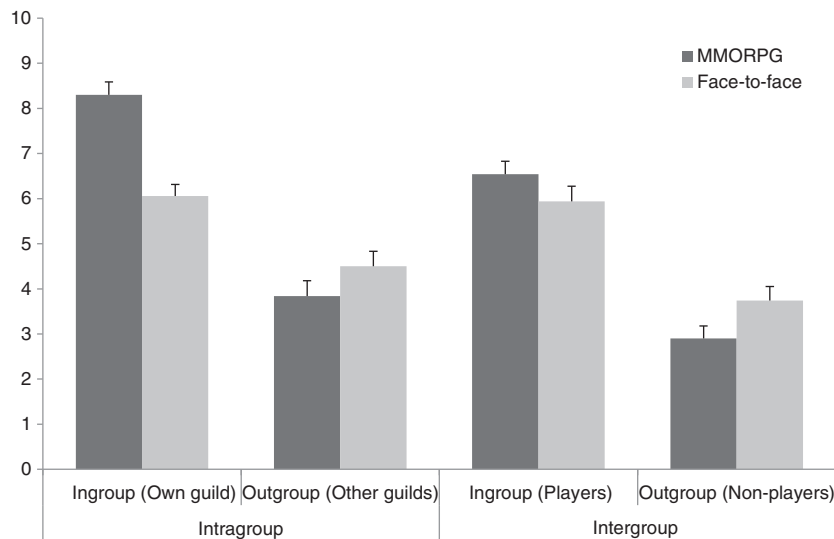
Figure 2.   Identification scores and standard errors as a function of the context, target and comparison level, study 2

significantly higher than out-group (other guilds) identification ($M = 4.17$; $SD = 2.38$). These results further support H1, showing evidence of considerable self-in-group overlap.

Consistent with H2, in-group identification scores showed a significant interaction between the context and comparison level, $F(1, 196) = 7.82$, $p < .01$, $\eta_p^2 = .04$, with in-group (own guild) identification scores higher in MMORPG ($M = 8.3$; $SD = 2.03$) than in face-to-face condition ($M = 6.06$; $SD = 1.8$), $F(1, 196) = 29.18$, $p < .001$, $\eta_p^2 = .13$. In line with H3, the players' identification scores were equivalent in the MMORPG ($M = 6.54$; $SD = 2.04$) and face-to-face conditions ($M = 5.94$; $SD = 2.37$), $F(1, 196) = 2.09$, $p = .14$, $\eta_p^2 = .01$.

Out-group identification scores also showed a marginal effect, in line with H4: Non-players' identification scores tended to be lower in MMORPGs ($M = 2.90$; $SD = 1.95$) than in the face-to-face condition ($M = 3.74$; $SD = 2.22$), $(1, 196) = 3.53$, $p = .06$, $\eta_p^2 = .02$.

Discussion

Study 2 evidenced the same in-group favoritism phenomenon as study 1 (hypothesis H1) but in a different game and with a less directive method (using a free response format instead of a questionnaire): Players displayed in-group favoritism toward their guild in both contexts. Moreover, in accordance with hypothesis H2, players placed greater value on and identification with their own guild in the MMORPG than in the face-to-face condition.

In line with hypothesis H3, in-group scores revealed that guild-related perceptions are sensitive to the interview context (in terms of valence and identification), whereas the more inclusive social category of players is more stable. This phenomenon could partly be explained by the congruence between the guild and the MMORPG: In the social environment of the game, the guild is particularly accessible cognitively, and lower identifiability might increase group assimilation and depersonalization, in accordance with SIDE principles.

The out-group of non-players did not differ in valence from the in-group in the face-to-face condition. In contrast, consistent with hypothesis H4, the MMORPG context led to a stronger contrast with the non-player out-group majority. The gaming context seemed to strengthen the distinction between the two groups, based on strategic effects and probably also on the game's distance from ordinary social reality. Indeed, even if participants responded vocally in the MMORPG, they essentially evolved in an intragroup context (by definition, within the game, meeting a non-player is impossible), a situation that is particularly congruent to the questions addressed in the interview. Therefore, some terms used by the players in the MMORPG to describe the non-players did not appear in the face-to-face condition (e.g. *intolerant*, *mockers*, *do not seek challenges*, *stressed*, *unimaginative*, *formatted*, *stupid*, *know-it-alls*, *think players have no life*). The expression of these terms could stem from identity performance (refer to Klein et al., 2007) and be facilitated—if not mediated—by the context.

Finally, considering the phenomena observed in this research, it should be noted that the face-to-face context we used (a game room) may not be totally separated from the game. We could thus expect even stronger differences in more neutral environments (e.g. professional, family or school context).

GENERAL DISCUSSION

This article aimed to examine MMORPGs from a social identity perspective. This area of study is of particular interest to social psychology, as guilds develop within new social environments. Indeed, when guild members communicate, they may be geographically distant, know each other only through their avatars and pseudonyms, without having ever met in "real life". While these groups might be considered artificial, they are connected to the self and personally relevant to their members: They become social identities.

Both studies showed strong in-group favoritism on the basis of guild membership. Moreover, the guild offers a relevant subordinate category developed in a particular gaming practice and a particular environment: When surveyed within this environment, players identify more strongly with their guild than with the superordinate player in-group. This difference is

reduced considerably when participants are questioned outside of the game. This finding is relevant to various studies that compare levels of identification with workgroups and with entire organizations and try to make inferences about the absolute differences (Riketta & Dick, 2005): Unlike the present research, that research typically does not control whether the survey is conducted in an intragroup or intergroup context. According to SCT, the intracategorical differentiation (the guild level) is more salient within the game because anyone encountered in this context belongs to the supraordered group of players (Hogg & Turner, 1987). In addition, salience of the guild occurs in a context of masking of personal attributes and visibility of membership cues, in line with the SIDE model.

This study supports prior work on social identity, both conducted in lab-based research (e.g. of the SIDE model) and of real-life communities such as MUD players (e.g. Utz, 2003). However, the present research also extends this prior work in several respects. As mentioned, identification effects were demonstrated at the intragroup level of guilds. This is important because the guild is entirely built within the ecological context of MMORPGs (unlike players' groups) and it endures over time (unlike laboratory-assembled groups studied in the SIDE framework). The guild is therefore the most prototypical expression of what might be labeled a "computer-mediated group". This feature may also explain why the guild has a greater significance in the MMORPG (and less meaning outside) because its meaning is derived from the ludic and fantasy context of the role-playing game.

Beyond the guild, this research also reveals effects on the perception of the out-group in an intragroup context. Study 2 shows that context has no effect on the perception of the other players, but the out-group of non-players is clearly negatively valued in the context of MMORPG. We believe that this phenomenon illustrates the strategic effect of SIDE and reveals an attempt of players to manage their social identity. Indeed, because players are sometimes perceived negatively (games being associated with addiction and nerdism rather than with imagination or passion), the intragroup setting of the MMORPG would be one of the few spaces within which to challenge the dominance of non-players and their judgment against the players. The devaluation of non-players (seen as "intolerant" or "formatted" for example) could help the players resist the negative image that society holds of them and thereby resist these threats to their identity. The strategic use of an anonymous in-group context could help players reaffirm and protect their social identity and also express more extreme ideas to the interviewer without much concern about his/her reactions.

Several other features distinguish this research from prior studies in the literature. The results were based on verbal interviews, which are an infrequent approach in most studies in this domain: Prior research mostly relies on directive methodologies such as questionnaires. The application of in-group and out-group stereotypes to the self is also original and seldom investigated. However, we may also consider using traditional measures to extend this research (e.g. stereotyping scales, group identification scales, group homogeneity measures). Also, our results regarding in-group favoritism and group identification could have been influenced by moderating factors, such as avatar level, player experience,

commitment and individual propensity for "role playing" (Williams, Kennedy, & Moore, 2011). These factors should be analyzed in future work, as well as the duration of membership. This latter factor could be important to forming of a social identity within a guild because seniority in the guild gives players the opportunity to gain higher hierarchical level, experience more confrontation with the out-groups, strengthen group cohesiveness, etc.

Some social identification cues still exist in the game (e.g. faction, class, race, gender of the avatar) that may potentially enrich self-categorization phenomena beyond guild membership. For instance, our operationalization of the out-group (members of other guilds) did not consider the factions guilds belong to (e.g. Horde versus Alliance in World of Warcraft). The players could indeed perceive differently guilds that belong or not to their own faction. The same goes for guild norms (e.g. prosocial, competitive, aggressive), which could influence the perception of other guilds/factions. It would thus be interesting to study specific guilds in detail. Finally, our studies did not examine the potential effects of the avatar because each player answered without reference to a particular avatar. However, a single player can use several characters belonging to different guilds or even to opposite factions: The key issue in this context is to identify the most relevant in-group for him/her. It is also possible that the avatar itself has an influence on the answers, an orc warrior being likely to answer differently than a human priest for example (refer to Proteus effect; Yee & Bailenson, 2007). Overall, these various categories and their respective effects on social identity and self-categorization open avenues for future research to better understand the complexity of social processes in MMORPGs.

In sum, by assessing social identity content and measuring both group valuation and social identification, this research led us to conclude that group phenomena in virtual contexts can be similar to real life social processes: Although virtual, guilds are not artificial because they become social identities and shape the perception of self and others in the game context. In an environment that is globally disconnected from everyday life, identification processes offer a social reality to virtual groups that become personally important to players as an integral part of how they see themselves. In addition to players' group identity—also linked to social identity—this process may explain in what way playing multiplayer online games is self-involving.

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