Character Play – The Use of Game Characters in Multi-Player Role-Playing Games Across Platforms

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Avatars are a commonly used mechanism for representing the player within the world of a game. The avatar forms the main point of interaction between the player and the game, and thus the avatar is an important game design feature. Character-based games combine the concept of an avatar with that of a character, enhancing the avatar with specific features that commonly are changeable, and which can be defined within or outside the framework of the game rules. Within digital games, the rules-based features have received comparatively more attention than, for example, the personalities and background histories of game characters. This article presents results from a comprehensive empirical study of the way complex game characters are utilized by players in multiplayer role-playing games across two different media platforms. The results indicate that adult players are capable of comprehending and utilizing game characters with well-defined personalities and backgrounds, as well as rules-based components. Furthermore, that the game format plays a significant role in the pattern of usage of the character elements. This pattern appears directly linked with variations in the way that the different game formats handle player characters and activate or promote the activation of, different forms of character elements. The degree to which different character elements are activated also has implications for the degree of player engagement in the character.

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1. INTRODUCTION

The term avatar was originally defined in relation to digital culture as the representation of the user, originally as a text-based construct in early MUDs and other digital games, and eventually as a two-dimensional icon on internet forums or similar online communities. In the context of computer games, avatars form one of the primary ways of forging the link between the player of a game and the game itself, that provide interaction to games.

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Avatars are a form of player representation in the game world, and the majority of digital games, from the earliest instances like *Space War* and *Akalabeth* through more contemporary productions such as *Fallout* and the *Doom* series, utilize *avatars* as the main vessel for the players' projection of intent and will into, as well as interaction with and manipulation of, the game world. Avatars as the vessel for the players' interaction with the game are however not a consistent feature of computer games. For example, most real-time strategy games (e.g., *Starcraft, Total Annihilation)*, turn-based games (e.g., *Civilization, Diplomacy*) and "god-simulations" (e.g., *Black & White* and *Sim City*) do not utilize individual game avatars as representations for the player, but puts the intent and will of the player in a more abstract representation from which the game world can be influenced (e.g., directly, via constructing and controlling military units in *StarCraft* or more subtly, via raising or lowering taxes in *Sim City* for example).

In games that utilize defined avatars as the physical representation of the player in the game world, the player directs or influences the behavior of the avatar [Ibister 2005], and the game system provides a reaction to the actions of the avatar, transmitting this information back to the player. The player's relationship with the avatar is thus inherently interactive, albeit limited in nature to the range of mechanisms offered by the interface in question, for example, a typical PC or console. The avatar can also be viewed as a form of filter to the events of the game world. The avatar generally forms the primary (but not necessarily only) means of interacting with the game; and events will generally be presented for the avatar or from the perspective of the avatar, notably during active game play. Exceptions can occur: a cut scene can foreshadow events the avatar knows nothing about, but this aims at building tension and engagement in the player.

In early video games, the avatar-based representation could be composed of a couple of pixels (e.g., in *Pong* or *Breakout*), but as graphics technology has matured so has the level of detail in avatars, to the point of full 3D graphics and minute animations of, for instance, facial expressions. Player-controlled avatars have also been developed into player-controlled *characters* by naming them, providing background histories, abilities, personalities, and other features associated with characters in theatre and film [Tychsen et al. 2007b]. Player-character are more than simply avatars, and can be viewed as a form of actors – designed to have distinct expression, behaviours, movements and personalities, which make them stand out to the player. Examples include: *April Ryan* (*The Longest Journey,* 2006), *Patrick Galloway* (*Clive Barker's Undying,* 2002), *Guybrush Threepwood* (*The Secret of Monkey Island,* 1991*; Escape from Monkey Island,* 2001) and *Gabriel Knight* (e.g. *Gabriel Knight: Sins of the Fathers,* 1993). Furthermore, it is increasingly common for games to offer players the opportunity to customize a basic character model or template, as well as provide *character development* as a main feature of a game: While the spaceship-avatar in *Space War* remains constant throughout the game, avatars in *Morrowind* or *World of Warcraft* can change in appearance and/or abilities throughout the course of the game, a feature that harks back to the beginning of tabletop role-playing inspired digital games, and forms a key defining feature of the role-playing game genre [King and Borland 2003]. In role-playing games and similar character-driven games, the design of player-characters is crucial to the gaming experience because it forms a major component in the interface between the player and the game world.

Despite the advantages of the graphical representation of digital game avatars, development in contemporary character-based computer games is (generalizing roughly) focused on the rules-based components (statistics and abilities) and *external,* visual and auditory, elements of avatars: physical properties like appearance (including static items

such as clothing and weaponry), as well as properties relating to interactions with the game world (e.g., voice, stance, affordances, and physical behavior). The *internal* elements of game avatars (e.g., integration of the character in the game world, its personality, motivations, and other similar elements) have, compared to the external, received less attention from game developers. Game characters are generally much more two-dimensional than comparable figures from media such as films and books (see, e.g., Sheldon [2004]).

The dichotomy between the development resources devoted to external and internal elements has a number of causes, with possibly the most important being the need for the players to be able to project themselves into and maintain control of the character [Guard 2000; Rollings and Morris 2004]. According to this practice, characters with complex arrays of internal elements (not designed by the players themselves) hinder the process of projection, and thus of immersion and engagement with the character. This approach to character design emphasizes the use of the physical properties (design) and physical behavior to add personality to the character [Ibister 2005] in a manner comparable to that used in comics, striking a balance between establishing general properties of the internal elements of the character and keeping these relatively generic, so as to avoid letting the personality impact negatively on the player.

In contrast to this viewpoint is some of the very scarce empirical research on games (e.g., Mallon and Webb [2005]; Clarke and Duimering [2006]; Tychsen et al. [2006b]). For example, Mellon and Webb [2005], on the basis of interviews with players following the playing of adventure and RPG-style computer games, noted that the players appreciated the inclusion of "psychological" traits, such as trust and suspicion, as the basis for behavior, relationships, and feedback between the player character and NPCs. Mellon & Webb [2005] found that the use of characterization to positively impact the engagement of the players was as important as the manner in which the characterization was implemented: Non-interactive techniques caused more frustration than interactive techniques, where characterization was integrated into and utilized by the game design (the games studied were single-player). In essence, players wanted to make moral and attitude choices, and to see the choices make an impact on the game.

Furthermore, in an empirical study of the relationship between players and their characters in multiplayer role-playing games (RPGs), Tychsen et al. [2007b] examined the reactions of players to avatars (or game characters) that were developed in depth in terms of personality, background, integration in the fictional world, and behavior, as well as the typical features of appearance and stats/rules-based components, on the player-avatar relationship. The study was based on a series of experiments across three different RPG setups (pen and paper (tabletop, PnP), computer RPG (CRPG), and a game master-mediated CRPG (GM CRPG). The results indicated that differences in the personalities of the player and the game character did not impact on the ability of the player to engage with the character or how interesting the engagement was found to be. However, the character design was found important to the gaming experience: for example, the degree to which the players found their characters interesting and easy to engage with seemed to correlate with the quality of the gaming experience. Significantly, the relationship between the players and their characters explained to a higher degree the observed variation in the gaming experience in the digital RPG than in the PnP context, where group dynamics was found to be the most important of the variables examined. While limited to multiplayer RPGs, these results emphasize the general importance of a well-designed character in story-based digital games [Sheldon 2004; Crawford 2004]. Furthermore, the results suggest that players are more tolerant of characters with

personalities more complex, than those typical of player-controlled characters in contemporary computer games – even if the personality of the complex player-characters vary from the personality of the players.

The "blank-slate" approach to character design in computer games prevents designers from taking advantage of the opportunities that become available when more complex characters are utilized, as seen in static media where the internal workings of the protagonists drive the story. While there are much-debated difficulties in translating static storytelling principles to interactive media [Juul 1999; 2001; Ryan 2001; Kucklich 2002; Frasca 2003; Jenkins 2001], the integration of detailed game characters does not need to impact on the ability of a game to be a game, and not exclusively a story.

Player-controlled game characters (or avatars) with well-developed internal and external elements are common to multiplayer games like *Neverwinter Nights*, to text-based MUDs, and even MMORPGs. However, in these games the character personalities are generally created by the players, without direct aid from the game itself. There are, however, a small range of single-player games that feature characters with varying degrees of personality and/or background histories (e.g., *Chronicles of Riddick*, *Max Payne*, the *Final Fantasy* series, and *Baldur's Gate*). Additionally, a few games outside the FPS/CRPG/adventure game genre utilize personalities (e.g., the strategy game *Medieval II*, where the characters feature dynamic personality traits that can change throughout the game). As noted in the game manual (page 16): *"As your characters do things in the campaign, they will begin to develop traits and gain follows as they either succeed or fail. Sometimes they will develop traits just as a result of sitting around or being in a certain environment."* A similar but simpler functionality is observed in *The Sims,* where the individual avatar (or "sim") is equipped with a basic set of personality traits, including ambitions. Note, however, that in these latter cases the players are not as directly in control of the avatar/character as in RPGs, FPSs, and adventure games that are based on the player having complete control of a single character (or possibly of a small group, e.g., *Baldur's Gate, Might & Magic* series).

While anecdotal evidence from PnPs points towards immersion in the game character being an important driver in the gaming experience [Fine 2002], evidence is more scant as to whether players in digital games willingly employ a complex predefined character – and if so, if and how different game features, that is, the manner in which the character elements are utilized by the game design, affect the use of the characters. The purpose of this article is to investigate any patterns of character use across three different RPG formats, building on the work of Tychsen et al. [2007b]. It is important to note that this (present) article does not put forward any claims as to whether complex characters are better or worse than characters with more two-dimensional personalities – this is likely to be a complex issue that depends on the game design and characters in question.

2. METHODOLOGY AND APPROACH

The data for this article was derived from a series of empirical experiments focusing on multiplayer RPGs across three different platforms: Tabletop (pen-and-paper), computer- and GM-mediated CRPG, utilizing the *DM Toolkit* of the *AURORA* engine, shipped with *Neverwinter Nights*. The experimental approach and procedure are detailed in Tychsen et al. [2007a; 2007b]; we will present a brief overview in this article (the new data presented here is described in detail).

Fig. 1. Screenshot from the CRPG *Neverwinter Nights*, utilized in the CRPG experiments.

2.1 Character Design

As this article is focused on the relationship between players and characters in multi-player RPGs across platforms, the character creation process will be a key component.

There are numerous and varying approaches to character design, each with specific advantages and disadvantages. Characters can in general either be completely pre-defined, or intentionally form "shells" which the player can project themselves into. A player-character which tends towards the later form would allow the player more freedom with the interpretation of the character, encouraging the design of the game story to be open to a variety of character personalities, as is evident in e.g. *Neverwinter Nights II* and *Fable*; while more complex characters may restrict the player more, and similarly permits a stricter storyline with less opportunities for player-characters to react in different ways. This is seen in e.g. *Max Payne* and *Clive Barker's Undying* One of the specific purposes of this article is to evaluate how players relate to complex player-characters, hence it aims to create as comprehensive characters as possible, while observing the requirement that players should get through the character description in approximately ten minutes. The character model was defined by Tychsen et al. [2006a], and the process of creating the characters is described in Tychsen et al. [2007b]; we will briefly outline the process with a focus on the features important to the present study.

In essence, the design of the player-characters is divided into four components: (1) *character personality,* (2) *integration,* (3) *appearance*, and (4) *rules* components, each with its own set of requirements to ensure methodological consistency. It was necessary to utilize the same character-generation process and identical methods for presenting these characters to the players, across the three RPG formats. Any variation between formats would insert a variable in the experimental setup whose influence it could be hard to define and calculate the effect of.

The characters contained the following components:

(1) ***Rules (Stats)***: *traits, abilities, skills,* and *class*: Definition of the rules-based features of the character. These components were in all three experiment setups, provided as printed character sheets detailing the rules-based components. In the CRPG and GM-

mediated CRPG sessions, the character sheet was also accessible in-game. The rules system from *Neverwinter Nights* was used in all three setups.

(2) *Integration*: The following character components were considered:

- *Location*: Where is the character and why?
- *Background*: What is the background history of the character and the events leading up to the game's starting point?
- *Contacts*: What contacts and ties does the character have to nonplayer-controlled characters (NPCs) – for example, family and friends?
- *Connections*: What is the relationship between the character and the other player characters?

All characters were created using the same model for integration features, with the text divided into a similar set of sections. The character description contained an introduction/background history styled to the specific theme of the character, written in a style and language that the character would use, outlining the personality, morals and ethics of the character. For example, a personal account of a series of tragic events:

> *"I will never forget Beldagar Keep. The sound of the human prisoners being tortured night and day, the laughter of demons, the moans of the wounded on the battlefield … all because of yet another human archmage who believed he could summon and dominate the forces of Hell."* (excerpt)

The personal introduction was followed by a more direct description of the character in the classic style of PnPs (for example, "*[…] is an elven ranger from the High Forest, the last bastion of the elven race on the main continent of Faerun."* (Excerpt; the name of the fantasy world of Faerun is trademarked © Wizards of the Coast, and is the name of one of the continents in the *Forgotten Realms* game world).

Each character was also provided with a list of optional goals, which gives the players a handle on the character. The goals were optional, and many players chose to use them as a rough guide to their character's motivations rather than specifically aiming at reaching the goals. Example:

> *"Play the others against each other, so that they do not plot against you!"* (excerpt).

Finally, each character description contained a brief introduction to the other four players in the group and the nature of their relationships, as perceived by a specific character:

> " *[…] Probably the most faint-hearted and self-sacrificing idiot you have ever met. This guy cannot live if he does not continually please someone. How anyone ever survives with this kind of attitude is beyond you."* (Excerpt).

(3) ***Appearance***: Digital characters, which are generally represented by avatars in virtual game worlds, as outlined above, require a definition of their appearance. In the current case, most were identical because all players utilized the same game engine. However, in designing digital characters, the following features are of importance:

> *Representation*: How does the avatar look? In the current experiments the avatars were designed using the *AURORA* engine so as to accurately reflect the characters, down to clothing and weaponry.

Physical behavior: How does the avatar behave and move? The way an avatar moves, stands, and otherwise interacts with the game world can be used to promote the character's personality or behavior. In the current study, all avatars had the same physical behaviors, being limited by the same game engine (see, e.g., Ibister [2005]).
Interaction: How does the avatar interact with the game environment, and how does the player interact with the character/avatar? In the current case, all avatars were restricted by the limits of the *AURORA* engine, which features the standard ways of interacting (e.g., combat, picking up objects, manipulating objects, using an inventory, and notably, interacting with NPCs via prescripted conversation trees and similar features).

(4) ***Personality***: This component was important to the design process, as it is one of the key concerns in complex character design for digital games. This because the personality of player-characters can conflict with those of the players. Furthermore, characters developed in detail provide less interpretative freedom for the players (e.g., Guard [2000]).

The personality component includes descriptions of the character's psyche (emotions, behavior) and goals; with some personality traits being very emphatically defined (others more subtly or in a manner that left room for personal interpretation), e.g.,*"You are inherently the epitome of the self-centered, narcissistic ego-maniacal, cold and cynical bastard. You do not have emotions apart from a healthy portion of rage with a side order of envy and an extra-large jealousy."* (excerpt).

In order to categorize the large spectrum of personality profiles, the EPAQ (Extended Personality Assessment Questionnaire) scale was employed [Helgeson and Fritz 1999]. This scale, developed for use in behavioral psychology, allows for the measurement of character and player personality profiles in the framework of a specified set of variables (the EPAQ model components), and the comparison of character and player profiles – that is, differences in personality.

The EPAQ model is based on four orthogonal groups of personality traits, collected into four categories: agency (A), communion (C), and the more extreme versions of the two: unmitigated Agency (UA) and unmitigated communion (UC) [Helgeson and Fritz 1999; Fritz and Helgeson 1998]. Each of the four categories is rated according to a point system, which depends on four series of eight questions (nine in the case of UC), each question of which is focused on a specific adjective/personality trait, e.g. aggressiveness, focus on self, focus on others, etc.

In designing the characters, profiles for each character were defined, with an emphasis on a specific EPAQ category in the case of four of the characters, and the fifth character displaying a more mixed profile. This ensured the widest spread of character personalities possible in a five-character group (other personality categorization systems (e.g., the BSRI) could be used in a similar capacity. The advantage of the EPAQ – apart from being an established method within behavioral psychology [Helgeson and Fritz 1999] – is that each item on the four EPAQ subscales is based on an adjective or very specific personality trait. The adjectives form a good basis for writing character personality descriptions. As many adjectives as possible from a specific category (A, C, UA, UC, and MIX) were utilized in these descriptions, and the weight and emphasis of the adjectives tuned to the specific character. Adjectives could either be written directly into the personality profile (e.g., "*you are incredibly arrogant*"), or presented in a context that had a very clear meaning. The latter approach was used in the background histories of the characters, while the first was generally utilized in a section entitled "*Role playing*

notes," which provided the player with a direct description of the character's personality. The five character profiles were constructed using the same EPAQ adjectives across the three game formats analyzed, but they were built around different themes in order to prevent player identification of personality templates encountered previously.

Further consideration was given to the in-built potential for the story, for each character, and the relationships/conflicts between characters (see, e.g., Applecline [2001; Lankoski [2004; Rollings and Morris [2004]; Sheldon [2004]; Glassner [2004]; and Crawford [2004].

2.2 Challenges in Empirical Game Research

The primary challenge in cross-platform studies of RPGs is the variety of rules, styles, and forms of game-play in the various platforms and between them. For example, despite being character-based, RPGs, PnPs, CRPGs, and MMORPGs are very different in terms of design, game-play, and the resulting user experience. This is related to their actual game mechanics, but perhaps more importantly to the use of a virtual world versus an imagined one, and to thousands of players versus a handful or even one [Tychsen 2006].

In performing empirical research on such a diverse range of games, even though the games were restricted to the three formats mentioned above, the assumption that the sample was representative of the population still needed to be addressed [Tychsen et al. 2007a]. In the current study, care was taken to ensure that the game story-lines were set in widely used fictional RPG worlds and that a common rules system and game setup were utilized.

A further problem in empirical games research is ensuring that the different formats being investigated are as similar as possible, expect for the variables being measured. This challenge was addressed by using for all experiments the same groups of players across formats, the same group sizes, rules systems, themes for the game story, and character templates. By aligning these variables across formats, results acquire a higher degree of reliability in cross-platform comparisons.

Another consideration is the effect that the physical room plays on the game and the players. It could be argued that the appearance of the gaming space (furniture, lighting, etc.) are part of the rule sheet that shapes the behavior of the players who utilize it as the physical framework for the game [Huizinga 1955; Salen and Zimmerman 2003]. This effect was not investigated in the current context, but significantly, the gaming space between the different gaming sessions was kept as constant as possible. Furthermore, sessions were arranged at the discretion of the participating players in order to mimic their usual gaming routines (note that not all had prior PnP and/or CRPG experience). For the CRPG sessions, the conditions had to be reminiscent of multiplayer gaming setups at private LAN-events or internet cafés, where gaming with multiple players physically located in the same room generally takes place.

Finally, psychological factors were not controlled; however, the sample size, spread of player experiences, age, and gender representation [Tychsen et al. 2007a] alleviated this problem somewhat.

In summary, there are in all likelihood aspects of the relationship between players and characters that have not been captured in the current experimental dataset, despite the broad scope of the methods employed. For example, an obvious extension to the current set of experiments would be to include both single-player and multiplayer games, as well as studies of first-person shooters and other digital games that utilize avatars as the main interface between the player and the game.

2.3 Experimental Setup and Procedure

A central concern of the empirical experiments was to keep the setup as generic as possible in order to alleviate test validity issues.

The CRPG *Neverwinter Nights* was utilized as the digital RPG representative. The game is a fairly typical representative of the genre and has the advantage of including a game master (GM) client, facilitating the running of game sessions with a human GM who controls MOBs and objects in the game world. The PnP game modules were styled in a similar way to the *Neverwinter Nights* modules , and based on the same rules system and game story themes (reversal and revenge). Three series of experiments were run: PnP game sessions, CRPG sessions without a human GM, and CRPG sessions with a human game master in control.

The experimental setup was kept as identical as possible between the sessions, with players situated around a table with full verbal and visual communication access. In the CRPG and CRPG GM sessions, each player had their own computer and monitor. Throughout the game sessions, a researcher was present to assist players with technical difficulties or interface issues, but he/she would not actively interfere in the game sessions. Each group received a comprehensive introduction to the game controls before the start of the CRPG and GM-mediated CRPG experiments, minimizing frustrations caused by interface problems and mitigating difficulties for nonexperienced players. It is important to note that while the experiments had to be carried out in a controlled environment to avoid the introduction of additional variables to the process, the gaming environment was kept as relaxed as possible to mimic the conditions in which RPGs are normally played, that is, private homes or internet cafés. Furthermore, time constraints were decided by the players themselves. The player groups were composed of five players (plus a GM in two of the formats), and the same groups carried over between each experiment series. Similarly, each group played the same set of three game modules (PnP, CRPG, and GM-mediated CRPG), with identical game story lines and situational setups. As outlined above, the character templates were also maintained across the game format changes.

The game sessions of the individual groups were run over two days, with the PnP sessions run one day, and the CRPG sessions on a different day (game sessions could last up to seven hours).

Sessions were run in Denmark and Australia, with 36 Australian and 15 Danish volunteer players as well as 5 experienced PnP/CRPG GMs. All the volunteers were adults, with ages ranging from 18-54, with the average age being 28.8. Both sexes were represented (14 females, the remainder males). Only the Australian players and one of the Danish groups participated in the GM-mediated CRPG experiments (40 total). Previous experience with multiplayer RPGs formed a possible factor of impact on the way the players utilized their characters, and hence was assessed in some detail. A 10-item questionnaire was designed to evaluate the experience of the players with PnP and CRPG play, and was provided to each player before their first game session. The questionnaire was divided into two sections: PnP_{exp} and $CRPG_{exp}$, calculated as the average of the questions (6 and 4 respectively). Each item was rated on a scale from one to four. The average score for the entire survey was utilized as a general expression of the experience of the player with the game formats (Exp_{tot}). The average PnP experience was 3.2 (variance: 0.77-4, standard deviation = 0.77), which is well above average; significantly, the average value was driven up due to the presence of 10 highly experience PnP players (scores of 4.0 for the PnP_{exp} subscale). The average experience with CRPGs was 2.54, close to the average for the scale (variance: 0.6-4, standard deviation = 0.6). The high

Fig. 2. Players and GM engaged in a PnP game session at the ICTi Center, Macquarie University.

Fig. 3. Players engaged in a CRPG game session at the ICTi Center, Macquarie University. Game view, bottom left.

variance and standard deviation indicates a broad distribution of player experience across the two formats, from completely inexperienced players to veterans with decades of game playing behind them.

In summary, the wide distribution in the age and experience of the participating players, the presence of two different cultures and both genders, provides a broad sample population demographic, and serves to broaden the validity and applicability of the results

2.4 Data Collection

The game sessions were recorded on video and audio, using two different cameras that recorded the players as well as screen action. Logs were extracted of any in-game chat in the CRPG and GM-mediated CRPG sessions. Following the experimental cycles, selected segments of verbal communication were transcribed and recordings digitized before analysis. Following each game session the player groups were interviewed about their experiences in a focus group environment including one or more investigators.

3. DATA EVALUATION AND RESULTS

3.1 Character Use Across RPG Platforms

Tychsen et al. [2006b] used content coding as a means of studying communication in multiplayer games, but they did not investigate the actual context of the coded utterances. Smith [2006] utilized contextual analysis in evaluating cooperation and competition in multiplayer games, and a similar approach is adopted here in order to assess character usage across the three game platforms.

Based on anecdotal evidence, as well as on extremely limited empirical material available on RPGs (e.g., Tychsen et al. [2006b]), we would expect to find the highest degrees of role-playing and use of character in the PnP gaming sessions. While it might be expected that the CRPG format promotes role-playing due to the presence of virtual reality negating the need for coordinating the actions of the player characters in the shared and imagined game world of PnPs, Tychsen [2006] and Tychsen et al. [2006b] observed the opposite effect. In their analysis of the communication of a series of PnP and CRPG game sessions, they noted that about 40-50% of the player utterances involved in PnP sessions were "in-character" (IC) (i.e., role-playing the game character), which provides an empirical measure for actual role-playing in RPGs. In contrast, only 15-30% of the communication in the CRPG situation could be similarly classified. Furthermore, the authors pointed out that 30-40% of the utterances in the PnP situation carried some form of dramatic embellishment in additional to functional content, or were spoken purely for dramatic reasons. This pattern was also observed in the transcriptions and game logs in the current experiment. In the PnP experiments, out-of-character (OOC) communication centered on rules questions, organization of the position and actions of the player characters in the shared imagined game world, environmental descriptions from the GM, and similar functional communication. It was often observed that multiple conversations were taking place at the same time.

The following is a typical example of the verbal conversation of the examined PnP game session. The communication varies between IC and OOC utterances, in this case in relation to a question to the GM (Characters are labeled after their EPAQ template).

C: *Huh - you can stagger; I am going to stroll charismatically. It's all ratings, it's all ratings.*
UC: [UA name], *eh,* [UA name], *are you rolling?*
UA: *Oh yeah.*
UC: *The camera?*
UA: *Yeah, yeah, of course. What is the problem?*
A: **sighing* Bloody civilians*
Game Master: [NPC name] *says "Don't worry* [MIX name], *I'll take lead."* [GM makes gun motions]; [to group]: *He doesn't have a gun, but he is trying to pretend.*
UC: *It would be great if it got picked up.*
C: [UA name], *can you roll the soundtrack?*
UC: [Hums Mission Impossible theme]
UA: *There is this nice song. Yes, I put it in there.*
A: *How long will it take us to get to the armory from where we are?*
Game Master: *It won't take you long at all, especially if you rush. But if you go at a rushing, but dramatic stride, it might take you a bit longer.*
C: *Rushing, but dramatic stride. Yeah?*
A: *Well, okay, yeah.*

The personalities of the characters were often made use of by the players, usually in relation to IC communication (e.g., when a group of players needed to make a decisions about a problem that involved issues of ethics, morals or behavior). In the following example, the players, role-playing their characters are debating the merits of reporting the truth from a war scene, or edit the contents to promote the war. The communion-oriented characters are arguing with the UA-character, who is in favor of the latter option:

GM: ***Soldiers are running, there're explosions everywhere, you're all looking around, filming.***
UA: *Great scene, action, action!*
C: *Yeah, okay, try to get shots of the friendly fire.*
UA: *Yeah. We...*
C: *That will rate really well.*
UA: *Yeah, but perhaps we shouldn't run the sounds. We want to have a good war, I mean; we don't want to have many people lost from our side.*
C: [Player banging fist on table] *Fred, it's not about the politics of it, it's about the truth, Fred. It's about the truth!*
UA: *No. The war … the war, this is a good war.*
UC: [UA name], *uh...* [UA name] *my boy, we'll have to sort of report the truth.*
C: *It's about the truth.*
UA: *Okay. Okay, good, good. We can cut. This is not direct broadcast, so we can cut. Good.*
C: *It's about the truth Fred, it's not about what you want it to be.*
UA: *No, we will edit it. We will edit it after.*

In the following example from a different player group, in the early part of a combat scene, the communion-oriented characters (C and UC, a reporter and a soft-drink company mascot) are flirting while the UA-focused character (the reporter's cameraman) interrupts, utilizing a much more uncouth language well in tune with the UA personality:

C: *That's my best color. […] I'm the star here, just remember that.*
UC: *If I give it to you will you give me more time with the camera?*
C: *I'm sure we can arrange that. I can interview you.*
UC: *That would be great.*
C: *Excellent.*
UA: *I'll give you plenty of time with the camera later sweetie.*
C: *Cameramen don't talk shut up.*
GM: *You hear a growling, roaring noise from outside and a thud, thud, thud of …*
UA: *What the hell is that?*
UC: *I'm scared.*
C: *Don't you think the military men here should be doing that?*
[…]
C: *I'm not military personnel, I'm a reporter!*

In the CRPG sessions that were not GM-mediated, the pattern of character use was completely reversed, with examples of verbal IC communication being extremely rare, despite the physical environment being similar to the PnP game sessions, with players having full audio-visual access to the other players. In these sessions, verbal

communication was almost completely oriented towards tactics, orientation, questions about the game interface and similar functional communication, with varying amounts of nonfunctional comments, jibes, criticism, and so on, added in. Compared to the PnP sessions, the amount of verbal communication was drastically reduced (in terms of words per minute). Player-player in-game communication via the chat interface of *Neverwinter Nights* was virtually nonexistent, apart from a few private text messages. The vast majority of text-based communication was between players and NPCs in the form of conversation trees.

The following example from the verbal communication of one of the CRPG game sessions forms a typical example of the emphasis placed on game-functional communication (which does relate to the game story):

A: *All right, I'll try and use the* [quest item]. *All right, you have a conversation* [Player name]?
MIX: *Yeah. Did you use it?*
A: *Nope, I'm going to try now.*
UA: *Yeah, it didn't work.*
MIX: *No?*
UC: *Maybe it's not this one, maybe it's one of the other ones.*
A: *It's not worth it; she's the only one that talks.*
UC: *But maybe you have to go around and cure all of the sobbing ones first, then you have to go and give...*
UA: *Yeah, all of them.*
UC: *Then, you know? You have to make them happy before she realizes it's herself that she's unhappy.*
C: *Yeah, that's true. Maybe you've got to do it to all of them.*
UA: *Try it on this one down here.*

The rare examples of actual role-playing, that is, use of the character's background and personality, are generally focused on the sections of the game session where the background or personality component of the characters are directly activated by the game plot or by another player (e.g., a player asking a question relating to the personality, background or behavior elements of the character or another player). For example, at the end of the CRPG game module, the player characters for varied reasons are interested in a specific game object (intrinsic to the game story). In this case, the players were generally observed to be activating the personality/component/goal components of their characters, however in a manner that directly relates to the in-game action, which means that it can be argued whether there is actual in-character role-playing taking place:

UA: *Ahm …* [C name], *can you give that to me please? This is the* [object name]. *I think it's only my duty to carry it.*
C: *Yeah, bring it over.*
A: *Where are you? I'm the one standing in the middle of the inn, would you mind giving that to me please?*
C: *So not only do I have to come over to you-*
UA: *Where are you?*
C: *Why do you get it?*
UA: *I would really like to hold it, because it's important that I'm the one who holds it.*

UC: *It's his quest, its fine.*
C: *He might be evil. You want it for yourself, don't you? Here you go.*
UA: *Accept. Accept. How do I take it?*
C: *I've tried giving it to you.*
MIX: *Just put it on the ground.*
[UA character attacks and kills C character and starts to run off with the object in question]
C: *Oh you bastard!*
UA: *Right. Haha, fools!*

A different example of character play from a different group of players in the same scene of the game module features a similar discussion about possession of the game object. In this case the players are verbally communicating directly, and while they are expressing the ambitions of their characters, it is uncertain whether they are actually communicating IC (note that this form of verbal communication was classified as IC by Tychsen et al. [2006b] in their examination of player-player communication in the CRPG *Champions of Norrath*):

A: *I got it.*
UC: *You got it?*
A: *Yep.*
UC: *What was it? What did you get?*
A: *The* [object name].
UC: *But it's useless. Give it to me.*
MIX: *My* [object].
A: *I'm about to destroy it.*
UC: *No, no, no. Give it to me.*
MIX: *No, no, it's my staff.*
UC: *Do not destroy it, it is worthless.*
A: *No, no, that's what I came here for, was to destroy it.*
UC: *It's destroyed, right? It's gone.*
MIX: *No it is not.*
UC: *We can use it to make some money, okay?*
[…]
UA: *I thought it did not have any power anymore?*
MIX: *Yeah, so give it to me!*
A: *I think there are a few things here that you are not quite understanding!* [Attacks MIX]
UC: *Are you two fighting?*

While the CRPG sessions did not reflect the same amount of IC communication as the PnPs, the personalities and goals of the game characters were observed being expressed indirectly through the actions of the character avatars within the virtual world. The effect is hard to quantify, as the tactical characteristics and stats of the game characters generally kept to the same theme as the personality and background elements, but a player acting according to the personality and goals of his/her character can be spotted when it deviates from the tactical role of the character. For example, the UA character in the CRPG sessions was a very strong (close combat) fighter, but one of the goals of the character was to try and weaken the other party members, thus putting him in a better

position to claim the above-mentioned quest object for his own nefarious purposes. This conflict between character stats/game tactics and character personality/goals presents something of a conflict to a game player: On one hand, the character would provide the best tactical support by being in front during combat, which would also grant the player first access to loot. On the other hand, holding back from combat situations where there was a chance the character might get hurt (very much against the personality of the character), in an attempt to expose other party members to the threat in order to eliminate or weaken them, would be in accordance with the character's personality and ambitions.

In one case the latter strategy was very successful; it resulted in the elimination of two opposing party members in the final boss fight of the game module, leaving less opposition to the UA-character claiming the quest object and escaping with it. In the cases where this behavior was recognized by the other players and questioned (generally during but also after the game sessions), the UA-player had to defend his/her actions and attempt to rationalize them to satisfy the suspicions of the other players. (It should be noted that the background of two of the other game characters included hints that the UA-character was acting differently than his honorable reputation might suggest.) In summary, these observations suggest that while the players in the CRPG sessions were unlikely to express their characters' personalities in situations where the game story or a game event did not directly prompt or activate such character elements, they do seem to affect the manner in which players make their characters behave within the virtual world.

The GM-mediated CRPG sessions displayed a third pattern in the use of player-characters. Players generally focused their communication through the chat interface, using verbal communication sparingly – possibly because a GM was providing real-time feedback on the players' actions. Hence their attention was focused on the virtual world to a higher degree than in the CRPG situation. While examples of IC communication between players, verbally and via the chat interface, are not as rare as in the CRPG sessions, it is closer to the level of the CRPG sessions than to the PnP games. In the following example from the game chat log, the agency-oriented characters are discussing the ethics of automatically attacking MOBs with the communion-oriented characters, following a couple of reckless attacks by the player of the agency character (note that the UA character in this game is a stealth type who did not like open (fair) combat). *Note*: the typos and spelling errors have been corrected in this and the examples from the in-game text-based chat.

UC: *And intelligence is a reason to live or die by your sword?*
A: [walks his avatar over to a beetle] *Hello mad beetle - are you angry for a reason? - Just a beetle guys*
UA: [ironic] *Now, now, that was a little bit thoughtful*
C: *Can we at least try not killing everything we see?*
UC: *I believe that all things live for a reason, and it is not our place to end their life*
UA: *I would like to suggest talk first then attack? If appropriate*
C: *I CONCUR*
UC: *Unless you are attacked first, I suggest, thank you* [UA character name]
A: *I wasn't going to reason with acid spewing beetles!*
MIX: *And in all cases except one so far, we were attacked first*
A: *I can kill the undead and daemon on sight, right?*
UC: *That is fine by me* [A character name], *I am sorry to be so insistent on this topic*

A: *Don't be sorry, I just want to know where I stand*
UC: *That is so like you* [A character name]*, the real you, the kind gentle one I know is in there*
A: **blush**

Instances such as the above are relatively rare however. In contrast, where either the GM (e.g., via controlled NPCs) or the game actively engaged, or "*activated*," the personality/background elements of the game characters, players would generally role-play their characters. In situations where a GM-controlled NPC engaged the entire group in conversation, all players would generally respond IC. The effect of NPCs that directly respond to the communication and actions of the players thus appear to promote IC communication (role-play). Furthermore, while the communication between the players was generally dominated by functional (tactical orientation, alignment) communication, verbal and text-based chat was generally carried out using the character names and not player names. In the following example, the player characters are discussing payment details with a GM-controlled NPC wizard who has offered them a job (GM-controlled communication highlighted). Note the focus on the payment expressed by the agency-oriented characters and the use of descriptions (bounded by **) of physical character actions that could not be done using the emotes built into the *Neverwinter Nights* engine:

C: *Sir, are you* [NPC name]?
A: *we understand you have a quest for us*
GM: ***Indeed, but please call me* [NPC name]*. And you must have been sent by... the people I contacted?***
A: *Correct*
UA: *Well met,* [NPC name]
C: *I am* [C name] *and these are my companions*
UC: *That is correct, sir*
C: *We are indeed here to meet you*
UA: *And we are very companionable*
GM: ***It is my pleasure to meet you all, in that case. I hope you can be of help***
UC: *What* [UA name] *means is that we are here to be of assistance*
MIX: **gruff nod**
UA: *Help is what we are best at, then getting paid is what we are second best at*
C: [UA name]*, please.*
GM: ***Ah, well pay is no problem, no problem at all***
MIX: *Having two folks with spikes on their amour is what we are next best at*
A: *Excellent*
GM: ***How does 3000 gold pieces sound?***
A: *4000*
C: **cough softly**
MIX: *Each*
GM: ****raises an eyebrow****
UA: **big smile**
MIX: **guffaws heartily**
GM: ***That is a little...rich. Fortunately, I am very rich. Final offer would be 3000 each***
UA: *Very fortunate indeed*
UC: *Please do not think that ALL of us are only motivated by greed, sir*

MIX: *That would be acceptable to purchase my service.*
GM: ***Well, fair lady, would the chance to help protect Faerun* motivate yourself and companions more?***
UA: *Exactly, and taking that into account, makes it 4000 for some and a little less for others*
A: *That is adequate compensation for considerable skills*
C: *I accept your terms*
GM: ***Thank you***
UC: *I am motivated to do what is right and what is needed, sir.*

* Faerun is the name of a continent within the game world

In summary, character use – in terms of the personality and background components – appears to be predominant in the tabletop game context, with the digital formats lagging somewhat behind. By comparison, use of the rules-based components of the characters – that is, stats and skills – are much more common in the digital formats. Here the game system actively and consistently forces/promotes players to activate these components of their characters (e.g., because the player characters are attacked or need to use their skills to accomplish specific tasks).

As a further test of the validity of the observed pattern, the transcripts of two groups with comparable characteristics (age, level of experience), but who played the PnP and CRPG game modules in reverse order (one Danish group, one Australian), were examined separately following the main evaluation. While each group displayed variations in their use of characters, both conformed to the overall pattern presented here (see below for further discussion).

On a final note, Smith [2006] noted that players in multiplayer computer games would often act in one way in the real world, while their character-avatars behaved differently. This division of the magic circle into real world and game world components was also observed in the game sessions analyzed for this study (i.e., the actions of the character-avatar would not always coincide with the verbal communication or behavior of the player). For example, an agency-focused character-avatar (self-centered, arrogant) acts to reduce the risk to himself during combat, which however places one of the other character-avatars in great danger. At the same time, the player controlling the agency-character provides advice to the player controlling the character who is suddenly in trouble, assisting him/her in managing the situation. A more detailed study of this phenomenon is currently being planned.

3.2 Game Format Effects on Character-Player Relationships

In the sections above an evaluation has been presented of how the participating players utilized the pre-generated, complex character they had been supplied with at the start of each game session. The results shows that the game format has a significant influence on the use of player-characters. The question that presents itself is whether this influence extends to other features of the character-player relationship in RPGs as well, for example on the elements of characters most appreciated by players, or the underlying decision on how to "play" the game character.

Questionnaire-based data was collected to address these questions before and after each game session, as appropriate. An open-ended questionnaire format was chosen because it does not limit the freedom of the players in replying to the questions. The open-ended format makes for only a qualitative evaluation of the data ; but the advantage

is that players are not artificially restricted in their replies to predetermined options that may or may not reflect reality.

(1) *Deciding how to play the character*: At the onset of a multiplayer RPG, the players are one way or another introduced to the game character they will enact. This is a basic feature of all RPGs, irrespective of format, although some PnP RPGs have experimented with, for example, switching characters during play or even cloning characters that die as a result of events in the game story (e.g., *Paranoia).* Considering the apparent effect of the format on the way players utilize their characters in RPGs, it is prudent to ask whether this disparity exists even before the game formally starts (the game story commences); that is, when the players are introduced to their characters.

Before each game session, the players were asked to describe how they decided to play their character (question text: *How did you arrive at the decision on how to play your character*?). The question was a part of a larger open-ended questionnaire, parts of which were utilized by Tychsen et al. [2007a; 2007b]. (Please consult these references for details on the construction of the questionnaire and formatting.)

The replies were grouped into a set of categories based on the replies (Table I), and revealed a similar pattern of responses across the three formats, suggesting that the process of deciding how to play a character, in situation where a pregenerated character is defined outside the control of the player, is relatively unaffected by the game format. Approximately 50 to 60% of the players based their decision on the character information, with a proportion of players including a second factor as well (e.g., from previous experience). There were12 to 20% of players who did not form a decision based on the character description directly, but relied on instinct or previous experience in playing similar types of characters.

In the PnP sessions, 12% of the players referred to a character from popular culture, to a stereotype, an archetype, or a similar context that reminded them of the character description, and which affected their decision on how to play the character. For example,

One of the PnP players observed that his playing of the character was "*Based on a character from a comedy series, an adrenaline junkie reporter.*" A smaller proportion (10 to 11% in the digital RPGs) modified their game character during the game due to the specific needs of a group of players, even to the extent of overriding the character description. For example, one player in the GM-mediated CRPG sessions noted that there was a "*lack of other players taking the role* [of the leader]," necessitating specific behaviors on the part of the player. Another player reported a similar case of prioritizing: "*I wanted to keep the group together.*" Interface design and game rules rarely featured as a cause, and then only in the digital CRPGs (Table 1).

Table I. How Players Decided to Play their Characters Across the Three Game Formats

Decision based on	CRPG	CRPG GM	PnP
Character information	55	51	64
Instinct/previous experience with same type of character	16	20	12
Group needs/story development	10	11	4
Interface/rules	2	6	0
N/A + other	16	11	20

All values in percent (rounded) of the total number of players in each experiment format; all results rounded to zero decimals.

In summary, the decision to play appears to be fairly uniform across the three formats, with the major difference being that group need/story development and interface/rules were rated higher in the digital formats than in the tabletop format, where the character information was emphasized instead.

The above suggests that character description played an important role for the players; but it does not say whether the players understood the characters. In order to address this issue, the participating players were asked after each game session to describe the dominant trait of their characters, as well as give a short description of this trait (via the same open-ended questionnaire mentioned above). Question text: "*How would you describe your character*?" "*What was the dominating trait of your character*?" The replies ranged from a few key words to sentences: for example, in the CRPG sessions a player noted that the C-focused character is an "*Elven ranger, gregarious, warm and good hearted,*" while a player of the UA-character simply put *"evil…"*. In the PnP sessions, one player described the UA-character as "*a morally bankrupt, greedy bastard,"* while another player described the C-character as "*In peace with himself, or so he believes, but uncertain about whether or not he should have a hard shell,*" accurately describing the central inner conflict of this character.

Of the 135 player-character pairs across the three RPG formats, there were only five cases where the replies of the players to the two questions did not appear to relate to any parts of the character description (2 cases) or only referred to the physical attributes of the character (1 case), or were on the borderline of the character description (2 cases). Replies varied, as would be expected in an open-ended question format, and in a few cases included elements of the stats/mechanics character components.

(2) *The effect of format on character appeal*: While the decision on how to play a character appears largely unaffected by the game format, there was a marked difference in the character elements that the participating players preferred across the three game formats (Table II).

After each game session the players were asked what they liked best and least about their characters. (Question text: "*What did you like the best about your character*?" and *"What did you like the least about your character*?"). The players' replies to these two questions can be grouped into four categories, depending on the type of character element that the replies refer to. But the majority (approximately 90% in all three formats) focused on two elements of the game character (mechanics/rules and personality/background), for example, one player referred to "self-confidence," which is a component of the character's personality element. While these two features of character design have an equal weight in the CRPG context, jointly comprising 90% of the most preferred features of the characters, 66% of the players in the GM-mediated CRPG games mentioned personality/background features, which rose to 90% in the PnP format.

When it comes to the least preferred elements of the game characters, a higher proportion of the CRPG players emphasized a personality/background element as compared to what they liked best. For the PnP games, the replies are more varied, with 52% quoting personality/background elements, and a relatively higher proportion mentioned mechanics/rules elements. Additionally, 10% did not find any problems at all with their characters. The pattern is less clear for the GM-mediated CRPGs, with personality/background taking up only 31%, and mechanics/rules 26%. The 29% of the players in the GM-mediated CRPG found nothing that they did not like about their characters, this number dropped to 10% in the PnP sessions and 2% in the CRPG situation (Table II).

Table II. Preferences of Game Character Elements

Reply (positive)	**CRPG**	**CRPG GM**	**PnP**
Mechanics/Rules	e	20	2
Personality/Background	45	66	90
Other	6	6	2
NA	e	8	6
Reply (negative)	**CRPG**	**CRPG GM**	**PnP**
Mechanics/rules	39	26	18
Personality/Background	47	31	52
Other	e	0	14
NA	8	14	6
Nothing	2	29	10

Results in percent; all results rounded. n=50 for CRPG/PnP, n=35 for CRPG GM. NA refers to players who did not answer this question. "Other" comprises all answers that do not fit into the mechanics/rules and personality/background categories.

The results indicate a generally higher focus on the personality/background aspects in the PnP games, as compared to the mechanics/rules aspect of the game characters. While 31% to 52% of the players pointed to aspects of their character's personalities or backgrounds as containing the elements that they liked least, which would seem to act as a deterrent to exploring complex characters in a game design context, we note that players are even more likely to point to a personality/background element as the preferred character element. Furthermore, as mentioned in the introduction, Tychsen et al. [2007b], based on data from the same series of experiments, did not locate any correlation between the players' engagement in the gaming activity with or interest in their characters nor did personality differences between the character and the player have any impact on the gaming experience.

4. DISCUSSION AND CONCLUSIONS

Smith [2007] noted that customizing the personality of a game character is an essential part of encouraging the player to identify with the character (e.g., via dialogue choices). This study indicates that players are tolerant of well-developed, pre-generated characters, but that they need to be prompted to activate the various elements of these characters in order to engage with those same elements. This does not mean that control of the character or the ongoing development and growth of the character should be taken away from the player. But it does point to opportunities for integrating personality into game characters and storylines, and more concretely into the game mechanics (e.g., via reward systems triggered by character (player) actions related to their personality profile). Additionally, digital characters appear to play an important role in the development of next-generation computer games, e.g. within the MMORPG-domain, as well as other forms of interactive digital entertainment that will increasingly experience a growing focus on interactive storytelling [Miller 2004; Crawford 2004; Sheldon 2004; Glassner 2004] and on believable and embodied agents [Trappl and Peta 1997; Nass and Ibister 2000], whether AI- or character-driven [Combs 2004].

Tychsen et al. [2007b] observed that player-characters, with complex personalities, did not negate the ability of players to engage with their characters across three different

multiplayer RPG formats, irrespective of differences in the personalities of the characters and players. The authors also noted that the relationship with the game character correlates with the quality of the gaming experience, notably in the digital format where there is generally less interaction with the other players as compared to a tabletop situation. This emphasizes the importance of character design in terms of creating characters that are easy to engage with, interesting to play, and conducive to the formation of emotional bonds between the player and the character [Sheldon 2004].

The logical next step in this line of investigation is to consider whether players are aware of the personality of their characters, or if they simply overpower it with their own, and whether and how the various character elements are utilized during RPG play and how the game format affects this use. As indicated in the questionnaire data, the players participating in this study displayed an awareness of the personalities of their characters, and expressed this awareness during game-play in a variety of ways (e.g., by communicating in-character (IC) or via the physical actions of their avatars within the game world). However, from the verbal and text-based communication between the game participants (players and GM), it also became apparent that for players to utilize the different elements of their characters, they had to be prompted or assisted to do so. In essence, aspects of the game character that are not prompted or activated by the game design or other game participants, gets relocated to the back seat: While the mechanics/stats components of the game characters were activated as a feature of core game-play in the *Neverwinter Nights* module in the CRPG sessions (e.g., when MOBs attacked the party of avatars/player-characters), the personality/background elements were rarely activated by either the game module or other players. This in turn had the effect of focusing the attention of the players on the mechanics/stats aspects of their characters, a point often noted and discussed by the players during the postgame group discussions. Irrespective of the focus on mechanics and rules, the players appeared aware of the personality aspects and expressed this awareness when the game or the other players encouraged them to do so. This is notably observed in the GM-mediated CRPG sessions when the GM activated personality/background elements, and in the PnP sessions when the players and the GM continually activated different character elements of each others characters.

This pattern of behavior is not unique to the personality or behavior elements of the game characters, but also observed in the way that players utilized their stats and skills. For example, one group did not care much for being cautious in their exploration of an underground temple, meaning that the ability of one of the game characters to locate and disarm traps went unused – even when the use of this skill would have given them a direct advantage.

PnPs stand out strongly in this and associated studies [Tychsen et al. 2007a; 2007b], not only in terms of how much fun the players reported they had, but also in terms of how engaged they were with their characters and their level of interest in them, as well as the ease with which the players felt the emotions of their characters.

By virtue of their flexible and player-reactive game process and narrative structure, PnPs lend themselves to continued activation of both the rules-based and nonrules-based character components, while CRPGs (generalizing) do not. Instead they focus on the rules-based components which can be expressed in numbers, with character-game interaction focused on the use of combat and noncombat skills and NPC interactions (generally featuring prescripted conversation trees). As indicated in the GM-mediated CRPG experiments, when features that actively engage and activate characters are utilized (i.e., the GM), players will utilize background/personality character elements.

Activating a broad spectrum of character elements leads to an increase in engagement: When players were asked how easily they engaged with their characters in each of the three game formats (multiple-choice questionnaire, Likert-scale values ranging from 1 to 5), the averaged results (n=50 for PnP, CRPG; n=35 for GM-mediated CRPG) were substantially higher for the GM-mediated RPG sessions (3.82 (PnP)) and 3.68 (GM CRPG), compared to the CRPG sessions (3.02). The relatively higher level of engagement is also observed in the use of character names rather than players' names in the GM-mediated CRPG experiments. Importantly, this does not mean that CRPGs were less fun to play than GM-mediated CRPGs [Tychsen et al. [2007a]. Different game designs have different purposes, and enjoyment of a character-based game depends on other features besides character design.

Note also that while the requirement for activating characters to facilitate and promote their use was observed across the tabletop and digital RPG formats, both formats face unique challenges in facilitating such activation.

On a final note, previous gaming experience did not appear to have a major influence on the different ways that player characters were used across the three formats. However, the inexperienced players often commented that they had limited time to focus on inter-player communication in the digital RPG sessions, as most of their attention was taken up with mastering the *Neverwinter Nights* interface. This effect was kept in mind when evaluating the session transcripts. Lack of experience with a game interface and rules was not a problem in the PnP experiments, where the emphasis on the use of rules could be adjusted by the players to suit their ambitions and experience. The adjustment process was usually negotiated during the beginning of the PnP sessions (referred to as the *premise*-building phase in Edwards [2001]).

This study is a first step in the investigation of the use of game characters in multiplayer RPGs, with an emphasis on those elements of game characters that are not directly integrated into the game rules framework, but possibly in the game story and environment. Further study of the empirical data available will add further depth to the conclusions presented here.

4.1 Implications for Game Design

These experiments have focused on adult players (18 years and over) and multiplayer RPGs. In all likelihood, the patterns observed in this study will vary as a feature of specific game design. An obvious extension to this study would be to evaluate single-player as well as multiplayer games, and to consider those computer games that utilize avatars as the main interface between the player and the game, outside the RPG genre (e.g., first-person shooters).

As with any empirical study, the conclusions are absolutely valid for the examined sample only, which ideally should be representative of a specific population. Our conclusions can therefore only be taken as indicative of the population of players who are adult (and potentially interested in multiplayer, character-based gaming). However, studies such as ESA [2005] indicate that the average age of people who play computer games is 30, meaning that a substantial part of the game market is comprised of adults.

Keeping these reservations in mind, we can draw three implications for game design:

(1) Players are capable of managing complex characters, irrespective of whether the game format is digital or tabletop-based.
(2) But merely having an interesting character is not enough in a game: Players appear to engage with and utilize character components – personality,

background, stats– when these components are activated or promoted by a feature of the game design, be this plotlines, combat sequences, a human GM, a co-player or similar – irrespective of the game format. If personality elements of a game character in a CRPG are to be used to broaden the spectrum of quests, these elements must be activated in a manner comparable to the development of rules-based character features (e.g., as seen in the use of character levels in *World of Warcraft* and almost any other digital RPG).

The importance of character activation leads to a need to consider the manner and pace at which character elements are to be activated in different types of games. Mallon and Webb [2005] noted that while the players interviewed did not mind an initial non-interactive introduction to their characters, they preferred to build up relations with NPCs in a gradual and manageable manner. However, the optimal pace for this process will likely vary from player to player. It is also important to note that the inclusion of complex characters at the start of a game should not be an excuse to avoid character development, although the pace at which character elements get introduced, the manner in which they are activated or promoted via design, and the way in which they develop will depend on the specific game design.

(3) Finally, it appears that the activation of many different character elements – background, personality, stats and so on – seems to increase engagement with the character and promotes character-based play.

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