Avatar Categorization

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ABSTRACT
The paper examines the various modes of designing video game avatars. The purpose is to establish an operational model for categorizing the avatars' design. Within a theoretical framework raised by Marie-Laure Ryan and Murray Smith I will establish two continua, which, merged together, lead to twin axes that can be used to describe certain archetypes in avatar design. This paper examines typical avatar design and provides theory for different design models.

Author Keywords
Avatar theory, avatar categorization, game design, possible worlds

Introduction
Most modern video games have their gameplay centered on a specific being. This might either be human, machine or something else, but is characterized by a clear marking of its individuality and of its physical presence in space. By this I mean that the player must be able to tell the being from its surroundings. The being is typically referred to as an avatar and is the player's entry point to the game. The avatar functions as the protagonist of the gameplay and also becomes the mediator of the fiction to the player. It is important to understand the fundamental mechanics of the avatar design because the avatar is a big part of the gaming experience.

Defining the avatar as an individualized being is only satisfactory as a linguistic categorization and is too abstract to be applied to video games. In reality game avatars come in different shapes and sizes often with few things in common. My meaning of the word "avatar" is a game unit that is under the player's control. The word "unit" covers the aforementioned physicality in space and the clear marking of this physicality on the screen. My meaning of the word "control" is that the avatar has to be causally aligned to the player and act under the player's operations within the game system. Control of the avatar is shaped in accordance with the game rules. For example in the typical first-person-shooter *Quake* (id Software/Activision 1996) gives the player minute motoric control whereas the mouse-controlled avatar of *Diablo* (Blizzard North/Vivendi Universal 1996) gives less accurate movement control. Both are avatars but are constructed to function within different game rules and systems. An avatar will be any game-unit that has action possibilities[1] and that answers to the player.

My aim with this paper is to create a usable way of categorizing avatars by examining the differences in design. The work leads to a naming of the differences and therefore the categorization will provide a way of including the basic design structures in naming the avatars.

Possible worlds for avatars
Marie-Laure Ryan's concept of possible worlds is the fictional characters' mentally constructed outcomes of different actions. For example the possibility of marriage will include hopes of happiness, but also fears of divorce etc. In fictions possible worlds serve to reveal the perceived possibilities of the character. The possible worlds inform the reader of the fiction of the goals and intentions of the characters and thereby provide the reader a means to judge the characters as either sympathetic or antipathetic. As an example Ryan uses the fairytale *Cinderella* [8]: By locking Cinderella in her room the stepmother creates two possible worlds, one where Cinderella gets to the ball and marries the prince, and another where Cinderella is hindered and one of her stepsisters instead marries the prince. The stepmother's action is judged as malign since the reader's sympathy is directed towards Cinderella's pursuit of happiness.

In games research, though, before utilizing this theory for analysis one must realize that it was meant for non-interactive fictions. An uncritical use of the theory will provide meager results as the player by definition is connected to the avatar and thus will be biased in the avatar's favor. A traditional use of the possible worlds theory only provides a minor understanding of the game avatars.

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[1] Without these no play is possible under the ludological paradigm, which broadly states that games need the possibility of player interaction.

The possible worlds theory has a different usage when applied to games. Since avatars by my previous definition are under some influence of the player – albeit not necessarily under total control – it is possible to imagine one type of avatars where the possible worlds are pregenerated by the game developers with a fixed personality, and another type of avatar where the player decides which intentions the avatar has. I perceive these two types as opposites and as extremes on a continuum of the player's influence over the avatar's possible worlds. I name the avatar with pregenerated personality a *Closed avatar*, since the player has no control over the avatar's mind, and change is only possible through a predetermined narrative progression. This avatar type has a complete personality from the beginning of the game, although parts of it may be secluded from the player or changed through the course of the game. Typical closed avatars include *Pac-Man* (init. Namco/Midway 1980), *Mario* (init. Nintendo 1981) and *Lara Croft* (init. Core Design/Edios Interactive 1996), since they all have predetermined mindsets and objectives inlaid in the narrative of the game. They react in a predetermined way to the unfolding of the narrative. The other avatar type I name an *Open avatar*, since it has no personality traits without the involvement of the player. This avatar type starts the game as a blank slate and gains its personality through player choices, which of course may be limited by game design. The avatars of role-playing games are the quintessential *open avatar*.

According to the ludologists [1, 3, 5] the narrative plays a minor role when playing games. Instead the ergodics[2] of a game captivate the player and under the ludological paradigm it seems unimportant whether or not the player decides if the avatar is happy or sad. The player controlling the avatar's possible worlds will also make choices regarding the development of the avatar's physical abilities. In my reading of the possible worlds theory the term covers the development of strengths and weaknesses of a given avatar in the game world and requires the player's awareness of the game mechanics. For example in role-playing games the acquisition of better equipment is a desirable possible world, just as losing valuable items represents an undesirable possible world. In the new definition of the possible worlds the two opposite avatar types – open and closed – differ in the way that the closed avatar has a pregenerated set of abilities, or a pregenerated development of abilities, whereas the open avatar lets the player decide[3] which abilities to enhance and which to neglect. The more practical view on the two archetypes is

better for describing the gaming experience and makes avatars easier to categorize.

Emotional Perspectives on Avatars

According to James Newman [7] the player inhabits the avatar in the gaming situation. This viewpoint perceives the avatar to serve the player as an empty shell – which the player can enter – that has certain traits and abilities. The avatar of the before mentioned first-person-shooter *Quake* serves as a prime example of this avatar type. There is no distance between the avatar and the player in the game as the avatar corresponds to all of the player's commands. Though this avatar type is most numerous, the relationship between player and avatar also holds an alternate possibility where the player does not inhabit the avatar. In the book *Engaging Characters: Fiction, Emotion and the Cinema* Murray Smith [10] deals with movie viewers' personal identification with onscreen characters. Without applying the film theory directly to games, I feel that the distinction between *central* and *acentral identification* [10] has useful elements for understanding avatar categorization. Whenever movie viewers identify with the onscreen character in an emotional first-person perspective, and thus see the character *as themselves*, the identification is called *central*, whereas it is called *acentral* identification whenever the viewers see the character – emotionally – as a third person.

Converted into game theory central identification is the above-mentioned Newman-inspired identification, where the player inhabits the avatar during play. In this avatar type there is a causal connection between the player's actions and the events in the game. According to Newman this causal connection reduces the avatar to a series of abilities:

> In the videogames, "Sonic" becomes the ability to run fast, loop-the-loop, collect rings (…) Lara Croft is defined less by appearance than by the fact that "she" allows the player to jump distance *x*, while the ravine in front of us is larger than that, so we better start thinking of a new way round [7]

The mode of acentral identification requires a separation of the player and the avatar, which in itself sounds paradoxical. However, the game series *The Sims* (Maxis/Electronic Arts 2000 & 2004) prove that this type of emotional identification is possible. In each game session the player has a certain group of avatars under his control (i.e. the family) while another group is uncontrolled (i.e. the neighbors), and still the different family members are not totally embodied by the player. The avatars of *The Sims 2* distinguish themselves in the fact that each of them has individualized needs and aspirations they seek to fulfill and are by the game design granted some autonomy to do this: If the player commands an action that collides with the avatar's desires, it will refuse to carry out the action. This could for example be to read a book when the sim needs to

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[2] Term introduced by Aarseth (Aarseth 1997) to describe the player's manipulation of game elements, which is perceived as a necessity for even playing games.

[3] The possible choices are, of course, also pregenerated, but this is unimportant in the sense that the player creates the avatar through choices made in the game.

go to the bathroom. So even though the player has some control over the avatars the degree of control is greatly reduced in comparison to other games. This reduction forces the player to identify acentrally and perceive the avatars as emotional third persons. To ease the buildup of sympathy the avatars have been designed with commonly appealing traits, such as big heads and eyes, exaggerated body language and comic relief in key situations.

Acentral identification does not mean that the player's role is reduced to that of an onlooker. A short look at *The Sims* will reveal that the player indeed has an active role to play: In this case part god (controlling the avatars' actions) and part head of family (deciding when they marry, buy furniture, etc.). Thus acentral identification does not mean a lack of ergodics.

Constructing the archetypes

So far two continua of avatar design have been created: One that distinguishes between *open* and *closed avatars* and another between *central* and *acentral identification*. My thesis of this paper is that avatars are better understood when placed on each of these continua. By merging the two continua it is possible to create twin axes with four quadrants. These four quadrants form the structure of avatar categorization:
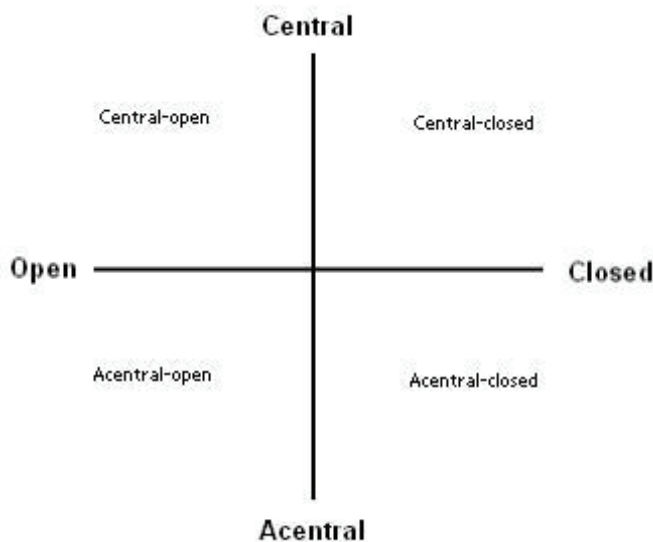
It can be argued that there are nine archetypes in the system since an avatar can also be placed on the axis or at the centre. This argument holds some merit and the possibility will be examined later on.

Another important issue is how to decide where an avatar is placed on the axes for some examples are not as easy to place as the extreme cases. Certain avatars are designed similarly, but the game itself can describe them differently. By describing I mean the way the game communicates information about the avatar to the player. For example in

the role-playing game *Baldur's Gate* (Bioware/Interplay Entertainment 1998) the game gives the player numerical insight on the avatar's health and experience whereas these features are visualized through gradually filling bars in *The Elder Scrolls IV: Oblivion* (Bethesda Game Studios/2K Games 2006) even though the avatars in both games are regarded as open and considerably alike. This difference in design aligns the avatars in *Baldur's Gate* as more clearly open and therefore the avatar is placed further towards the "pure" open avatar category. The player's deeper understanding of the avatar's mechanics provided by the additional information leads to an experience of greater openness. The game's description of the avatar on the central/acentral identification continuum is the number of control functions reserved for avatar actions (central) or for expressing sentiments (acentral), and the degree of avatar autonomy. The player's attention will be oriented towards these functions and a multitude of functions will claim a greater share of the overall attention. For example in *Diablo* the player controls the avatar through pointing and clicking with the mouse, whereas the player in *Quake* uses both keyboard and mouse for motoric control. While both are examples of central identification, the avatar of *Quake* is placed further towards the central category, because the higher number of motoric controlling functions causes the player to inhabit the avatar to larger extent.

The division of the avatar archetypes into four categories contains graphical similarity to the graph in Richard Bartle's text *Players who suit MUDs* [2]. In his analysis of player behavior in Multiple-User-Dungeons, he identifies four different player archetypes, which are contained in his graph. Although my graph of avatar archetypes and Bartle's graph of player archetypes have visual resemblance they are occupied with different subjects. Bartle examines the player's use of avatars, while this paper examines avatar design. Bartle shows that the player modifies the use of the individual avatar, but the individual use does not overrule the fact that avatars are designed differently. The two categorizations might work together as Bartle's can be modified to include several avatar types, whereas it now is primarily concerned with central-open avatars.

The consequence of categorizing the avatars is somewhat rigid as it forces every type of avatar into a fixed spot. However, by categorizing an avatar within one of the four quadrants I do not find its "true" essence as much as a description of certain traits. A number of twin axes could be produced to describe different aspects of game avatars, but I have chosen these two continua to describe, in my opinion, the most game-relevant features.

The Central-Open Avatar

This category is typically avatars of role-playing games. These games allow the player to control the avatar's progression of skills and the emotional aspect of the possible worlds. For example in *Knights of the Old*

Republic (Bioware/LucasArts 2003) – a role-playing game set in the *Star Wars* universe and based on the *Dungeons and Dragons* (TSR 1974) rule system – the player himself chooses whether to be good or evil and how to react to other characters' actions (forgiving betrayal, initiating romantic relations, etc.). Central-open avatars require a more thorough knowledge of the game mechanics from their player since he or she will have to make choices for the avatar based on this knowledge (the usefulness of different skills, the best weapon in a given situation, etc.). The avatars demand more time from their players, but in return their increasing abilities will reduce requirements of the player's performance. As the avatars gain additional strength their dependency of their player's abilities decrease. For example in *World of Warcraft* (Blizzard Entertainment/Vivendi Universal 2004) it is quite unlikely for a tenth-level character to kill a sixtieth-level character in a duel, even though the player controlling the tenth-level avatar is a superior player. The central-open avatars are defined by the inequality of strengths, which serve as a drive for the player to improve the strengths of his or her avatar. The inequality is not solely among competing players, but is also present in the discrepancy of strength between the player's avatar and the computer-controlled enemies.

Another important consequence of the central-open avatar design is that the game is more likely to be replayed, since all of the player's choices will have excluded others. The gaming experience is altered for the player through these choices and identical situations can be played differently according to the avatar's strengths and weaknesses. The player is enabled to create an avatar that suits his preferences through the various choices. The central-open is the avatar type that to the highest degree allows its player to construct a virtual self-image and create a personalized protagonist.

The category can also be used to describe non-computer game avatars such as pen-and-paper characters of role-playing games.

The Central-Closed Avatar

This category is perhaps the most popular – and certainly the most used – and includes classic characters such as Pac-Man that combine clear motoric control with a predetermined set of abilities. Simple central-closed avatars like *Pac-Man* have a broad appeal, since these games are easy to learn and do not require long game sessions. It is a mistake though to believe all central-closed are simple avatars. Modern examples like Agent 47 of the *Hitman*-series and Lara Croft of the *Tomb Raider*-series need a lot of game time to master and each mission requires a thorough examination of obstacles and possibilities of interaction for the avatar. The game's high demand of its players makes it wrong to believe that the central-closed avatar type is directed to people who lack the resources to

learn the elaborate game mechanics of the central-open avatar.

As mentioned in the beginning the central-closed avatar is not necessarily static in its abilities throughout the game. In the *Star Wars* based first-person-shooter *Jedi Knight II: Jedi Outcast* (Raven Software/LucasArts 2002) the avatar – Kyle Katarn – serves as a good example: Initially he has no force powers or light saber, but as the narration progresses Kyle Katarn slowly develops his abilities. This development though is beyond the player's reach and therefore I consider Kyle Katarn an alternative central-closed avatar, but central-closed nonetheless.

An important feature of the central-closed is that the player becomes solely responsible for the success or failure of the avatar. The abilities of the avatar are specifically designed to fit the game and therefore the game itself cannot become impossible to complete: The player must blame his or her own lack of skill. Therefore the avatar type is suited for equalized competitive play, since only the player's skill counts, and not the avatar's gained experience.

One common feature in central-closed is the static aesthetics of the avatar. Usually it maintains its bodily design throughout the game, in contrast to central-open avatars, which have their looks altered either through bodily change or – more commonly – through obtaining equipment. The static design of central-closed avatars has two connected advantages: First the lack of development reduces design cost since no alternatives need to be designed. Second the avatar is more easily recognizable and thus easier to brand. All big-brand avatars (e.g. Pac-Man, Lara Croft, Mario, Solid Snake and Agent 47) belong to the central-closed category and support the thesis that clear-cut, unchangeable visual design facilitates the marketing of a certain avatar, as proclaimed by Toby Gard [4]. Most movie adaptations of computer games draw on characters from this avatar category (e.g. *Street Fighter* (de Souza 1994), *Lara Croft: Tomb Raider* (West 2001) and *Super Mario Bros.* (Jankel/Morton 1993)). The central-closed avatar is a single character and can be given a name, which also adds to brand recognition: The name Lara Croft is equally known (if not more) than her game *Tomb Raider*, whereas very few people (if any!) know what I called my hero in *Baldur's Gate*.

The central-closed category can additionally describe pieces in board games. In *Monopoly*, for example, the player becomes the single piece, which has certain, fixed traits. Likewise the player can only blame his own skill (and luck) for the outcome of the game.

The Acentral-Open Avatar

The number of examples of this avatar category is rather limited at the time. The far most successful is *The Sims*, and briefly the *Tamagotchi* (Bandai 1997). Both of these

games' avatars are designed to invoke sympathy in the player, and under the presumption that girls prefer softer values in computer games, this avatar type appears to be directed at that particular consumer group. Whether or not this presumption is true shall not be discussed here, but it is evident that this avatar type has certain differences from the former two. The game play of the two above-mentioned examples is oriented towards single actions, such as jumping or shooting, whereas the acentral-open avatar type is oriented towards organizing a string of actions to maximize the avatar's well-being. By focusing on the organization of actions, the player of the acentral-open avatar must assess success in the overall sum and not only in the isolated actions. For example in *The Sims* keeping the avatar well rested cannot be considered a success if all other aspects of its well-being are poor.

The construction of possible worlds is the outcome of an ideal sum of actions (in *The Sims* for example a promotion, a bigger house, etc.), which the player strives for through organizing the actions. Time becomes the primary resource for playing acentral-open avatars since each action takes up a part of the avatars' time, and to be successful means to maximize the well-being in the limited amount of time.

The open element of the avatar design unfolds itself in a variety of ways. In *The Sims* the player is allowed to construct his own family and thereby choose personality and aspirations. In *Tamagotchi* and *Black & White* (Lionhead Studios/EA Games 2001) the avatar's personality is influenced by the player's treatment. The pet in *Black & White* has its personality and appearance modeled after the player's behavior and treatment of the pet (i.e., if the player maltreats the pet or does evil deeds the pet becomes evil etc.). Interestingly the avatar's emotional possible worlds are connected to the technical possible worlds. In *The Sims*, for example, the avatar has a better chance of getting a promotion if it is happy, while the *Tamagotchi* has its physiology and lifespan determined by degree of happiness. The acentral alignment explains this correlation, where the player is rewarded game internally (better attributes for the avatar) and externally (player's joy of emotional success of the avatar) for succeeding in making the avatar happy. The acentral-open avatar design rewards the player on both an emotional and ergodic level.

The Acentral-Closed Avatar

This category is the most problematic and the least used. It has some inherent weaknesses, which from a ludological point-of-view makes the avatar type useless. The obvious weakness is that the avatar leaves little room for player ergodics, since the acentral aspect reduces motoric control and the closed aspect reduces emotional control. The player's role will be minor and only has some control of actions or physiology. A game with an acentral-closed avatar will have very limited outcomes, since the avatar

forms the possible worlds internally. The usefulness of these avatar types appears marginal and can hardly compete against the more flexible acentral-open avatar.

I know of one example of an acentral-closed avatar though: *Little Computer People* (Activision 1985). The game is a simulation of a man living with his dog and according to the game a unique avatar was created for each copy of the game, but this is done without involving the player, so the avatar can rightly be named closed. During the game the player can ask the avatar to perform an action or ask for a game of poker. The avatar, however, also interacts with the player through letters that express feelings and needs. The player has some control of the avatar, but is clearly separated from it, thus making it acentrally aligned. Games with acentral-closed avatars are not impossible to make, but in the current design, the avatar type seems quite unlikely to produce great games.

Overall the acentral-closed avatar category hardly seems useable because of the ergodic weaknesses. Movie characters, on the other hand, appear to fit into the category easily and maybe this is where a possible future for the acentral-closed category could be found. If the player has a deeper interest in the avatar – for example a virtual version of a famous actor or fictional character – it is possible that the game could have a stronger appeal. I am quite aware that this sounds like science fiction and resembles the theory of *Star Treks* holodeck as used by Janet Murray in *Hamlet on the Holodeck* [6], but if the player believes that there is some truth or sincerity in the avatar, the acentral-closed avatar can be a success. Another successful usage of the avatar type could be found in pornography, thereby creating interactive (maybe even emotional) pornography. Interactive pornography was tried with the game *Lula Inside* (also released under the name *Lula Virtual Babe;* release date unknown): The player must keep Lula happy through gifts in order to have sex with her and thus the game combines the *Tamagotchi*-concept with soft-core pornography. Virtual characters appear easier to create in pornography, since the primary attraction would be graphical rather than authenticity in behavior.

Between Archetypes

I earlier proposed the possibility of categorizing avatars between the four archetypes, and thereby maybe forcing the categorization to include additional archetypes. The question is whether these are considered as archetypes or not. Examples of the five possible categories (one on each axis and one at the centre) exist. For example in the racing game *Star Wars: Episode I Racer* (LucasArts 1999) the player can choose different race drivers, each with different strengths and weaknesses. The player can upgrade the engine and unlock new racers by winning races. Each pod racer avatar has unique qualities (which aligns it towards closed), an upgradeable engine that increase racing abilities (which aligns it towards open), and a high degree of

motoric control, which aligns it towards central. The different avatar traits place the avatar on the "central" axis, between central-open and central-closed. It is important to note though that this avatar type merely merges the trademarks of two existing avatar types. Avatars placed between quadrants are the natural result of dealing with continua and not examples of a new archetype. The categorization only will include four archetypes, but with the possibility of merging the traits into specific avatars.

Categorization of Atypical Avatars

The avatar categorization is also applicable to games with multiple avatars. In strategy games the player usually takes the role of a bodiless commander or god, while the commandeered units have physical presence in the game world. These units are placed on the axis between central and acentral identification. I make this claim because the player controls the units, which means that they are not autonomous, but simultaneously the player does not embody the individual unit and the game does not end with the death of this unit. Not even in games of regicide, where each opposing side must defend a certain unit (e.g. the Commander unit in *Total Annihilation* (Cavedog Entertainment/GT Interactive 1997)) does the player embody this specific unit. The placement of the avatars in strategy games on the closed-open axis varies from game to game and even from unit to unit. For example in *Warcraft III* (Blizzard Entertainment/Blizzard Entertainment 2002) the hero units are placed further towards the open category than the normal units, since the heroes gain experience and can obtain new equipment.
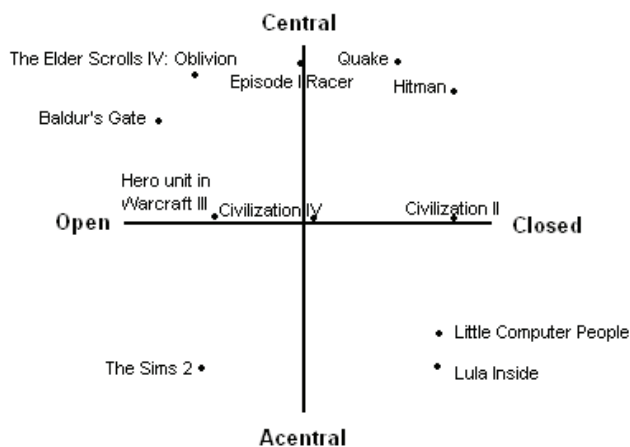
Examples of Avatar Categorization

Thoughts on Avatar Categorization

The idea of the player being either centrally or acentrally aligned is not entirely new: In *Beyond Myth and Metaphor* Marie-Laure Ryan [9] explores the player's position in the narrative through the categories *Internal* and *External*. Her categories operate on the premise that the player either positions himself or herself inside or outside the fictional world. She then pairs these two possibilities with the *Exploratory* and *Ontological* categories, which describe whether the player moves around like a ghost (exploratory) or influences the narrative (ontological). Since my theory is based on avatars (which in essence compel player interaction with the fiction) one might think that my avatar categories only operate within Ryan's ontological category. From a quantitative perspective this is true since the ontological games by far are more numerous, but games from the exploratory category can also be described through my categories. For example the puzzle game *Myst* (Cyan Inc./Brøderbund 1993) is a typical internal-exploratory game, where the avatar can be described as central-closed. I prefer to see the two categorizations as results of different parameters rather than one being subordinate of the other.

It is important to point out that some avatars shift category temporarily in a game. This happens, for example, in *Final Fantasy VII* (Square 1997) where the avatars are central-open, but occasionally have central-closed traits in mini games. I believe that these transitions are marked through different codes (for example cut-scenes or new graphical representation of the characters) and therefore do not confuse the player.

Conclusion

For a game developer the ideal conclusion of this paper would be that every avatar type fits a certain consumer group. This way a game could be targeted towards its audience at an early stage, which could increase sales. Although this belief might contain some amount of truth, the idea infers that a player only experiences the game through the avatar. In my experience there can be a big difference between two games with very similar avatar design (e.g. the varying quality of games based on the *Dungeons and Dragons* character system), which means that the avatar is not the only feature of a game, but only a part of a larger whole. The ambition of the paper is not to examine deeper psychological aspects of the player-avatar relationship, but merely to suggest a basis for avatar theory, a somewhat neglected subject in academic research, and to create a terminology for distinguishing between avatars.

It is also important to note that the different archetypes could be applied to characters outside video games. The parallelism suggests a similarity in the construction of fiction and games in the human mind, and thus the categorization could be expanded to include various types of avatar-based fiction.

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