Changing The Virtual Self

Avatar Transformations in Popular Games

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ABSTRACT

During play, players of video games intentionally change their avatars, altering how the avatar looks, behaves, or can be manipulated. This process is integral to gameplay, forming an important component both of successful and enjoyable play. We present an activity theoretic analysis of qualitative data from players to provide a grounded description of avatar transformation in four popular games. The resulting discussion aids understanding of this component of gameplay, and helps validate an under-used theoretical and practical approach to the study of video games.

Categories and Subject Descriptors

H.4 [**Information Systems Applications**]: Miscellaneous

Keywords

video game, activity theory, avatar

1. INTRODUCTION

> Johnny directs his avatar to defeat the Alien Queen in combat hand to hand combat. He collects the resulting "upgrade points" and a cut scene shows his avatar finding his long-lost father. In the game, he returns to the Space Dock where he walks to the Upgrade Capsule and brings up the Upgrade Menu. Here, Johnny carefully chooses to upgrade his character's strength by two points and to learn how to use a laser blaster. Exiting the menu, Johnny sees that his avatar has become more muscular. He instructs his avatar to purchase a laser blaster at the Space Dock's weapon store, then has him fly to the planet Aethoth. On arrival he finds defeating enemies is more easy with the new laser blaster, and that his character is able to pick up items that were too heavy before.

The above hypothetical scenario is a common one in video games, most especially in role-playing games (RPGs). In RPGs players take control of one or more avatars and direct them in the virtual world of the game. Along the way, they change the avatar in different ways, from using a new weapon, to explicitly upgrading statistics such as their strength and awareness. These changes, in turn, affect the gameplay and player's experience of it.

In fact, the process of transforming an avatar during gameplay is not at all limited to the role-playing genre. Many other games involve controlling an avatar as the core means of play, and, in many of these, the avatar can be altered by the player in certain ways. From Gordon Freeman picking up a crowbar and being able to break crates in *Half-Life 2* [22] to gaining a cooking skill point in *The Sims 2* [8], players can often influence the nature of their avatars. These changes can be functional, as in the case of a strength-upgrade in a game like *Fable* [14], allowing the avatar to lift heavier weapons, or more cosmetic, such as getting an afro haircut in *Grand Theft Auto: San Andreas* [17]. In both cases, however, the experience of gameplay is altered, either because the avatar is able to do new things, or simply looks different doing the same things.

The ability to change the avatar is central to gameplay in those games that allow it. It amounts to the ability to alter the very interface being used to play the game and affects the gameplay in important ways, both from the perspective of the functions available to the player, as well as the aesthetic experience of the game. Currently, literature on this topic is fairly limited, as we discuss in section 2. In this paper we present an analysis of qualitative data from players of video games and the video games themselves to bring to light underlying structures and themes in avatar transformation. We analyse this data from the perspective of activity theory, discussed in section 3, simultaneously introducing the theory and demonstrating its usefulness in game studies. After a discussion of the details of our methodology in section 4, we present the analysis of avatar transformation in section 5. The resulting analysis of avatar transformation as an activity, using activity theory terminology and analyses, may be of use to game developers as well as to academics who wish to use more cohesive and solidly grounded approaches to discussions of design and the analysis of finished products. We discuss possible future work and our conclusions in section 6.

2. BACKGROUND

The study of avatars includes a large body of work. From popular accounts of the history of the concept [7] to detailed economic analyses of how much people pay for different online avatars on eBay [5], there is a broad range of approaches. Other perspectives include issues of the depiction of gender through avatars [19], and the positioning of the avatar and its control within the narrative space of a game [18].

Of particular interest in the literature has been the relationship between the player and the avatar. The most common characterisation made has been the distinction between the avatar as a fictional character in a virtual world and the avatar as an interface to gameplay [3, 13, 24]. Jonas Linderoth, for example, has studied how children make this distinction in their play, particularly with an interest in the way that children tend to create their own understandings of the underlying game system, or interface, rather than using the "guise" or representations provided [13]. Likewise, Andrew Burn and Gareth Schott have studied the avatar in the game *Final Fantasy VII*, using multimodal theory to explore the dual nature of the avatar as protagonist in a narrative and as a "vehicle for interactive gameplay" [3].

The player-avatar relationship is further influenced, of course, by the player's ability to actively *transform* the avatar's nature. This process is less often discussed in the literature, but has been addressed by some authors. Diane Carr puts it well when she says that, "Your avatar acts for you, and evolves in a manner that reflects your decisions" [4]. Carr briefly notes such transformation as the acquisition of new weapons or upgraded skills in a role-playing game, and compares this to games where the avatar is "ready-made" and it is the *player* who must improve their skills. Andrew Burn and Carr have also explored the avatar creation element of Massively Multiplayer Online games using social semiotics, creating their own characters in the game *Anarchy Online* and noting their experiences both with the creation process and the ensuing gameplay and social relations [2]. The paper deals with the experience of avatar creation and transformation in this particular genre very well, and uses qualitative data to support a rich understanding of the experience.

Although some attention has been paid to the act of transforming an avatar, little detailed exploration exists. Positioning the avatar as a tool used by the player to play the game, and one that can itself be transformed in various ways, strongly indicates a potential use of activity theory. Activity theory heavily emphasises the process of *transforming* an object as mediated by certain tools. This is of clear relevance to modelling avatar transformation in video games.

The use of activity theory in the context of video games has been limited thus far. In the journal *Game Studies*, Kurt Squire, an education researcher, argues convincingly that activity theory could transfer well to video game analysis [20]. Martin Oliver and Caroline Pelletier use activity theory to analyse a particular video game [16]. Their focus is on using activity theory as a methodology to assess how and when learning occurs during game play, and to establish design guidelines from this analysis. Another approach using activity theory is Victor Kaptelinin and Michael Cole's work on the use of games in education and learning [11].

The use of activity theory to study video games is, however, still limited. In the following section we describe our own use of activity theory to model gameplay, and specifically our considerations of how it can be usefully applied to the question of avatar development.

3. GAMEPLAY ACTIONS AND ACTIVITIES

As we suggested in the previous section, activity theory is a potentially powerful approach to video games because it allows for the description and analysis of human conduct, such as gameplay. In using specialised terminology and concepts to describe gameplay we can often understand more than we would operating from first principles. In this section we briefly introduce activity theory and show how its most central concept, that of "activity" can be used to describe both gameplay generally, and the specific idea of avatar transformation we are examining in this paper.

Activity theory stems from the work of Russian psychologist Lev Vygotsky whose core interest was in the area of development, with a particular focus on children and the disabled. Alexei Leont'ev, a colleague of Vygotsky's, worked with his ideas to formulate a description of *activity* as a central concept in human psychology [12]. Leont'ev defines activity as a process in which one or more people transform an object in an acknowledged cultural or group context.

A key component of Leont'ev's thinking involved the adoption of Vygotsky's theory of mediated action, a triadic structure comprised of a subject, an object, and mediating tools [23]. We follow this model with two revisions. First, we add the explicit notion of an *outcome* to the model, following the work of Yrjö Engeström, though without adopting his overall collective-oriented conception of activity [9]. Second, as has been put forward by Victor Kaptelinin and indicated somewhat in the work of Engestrom, we separate the concepts of *object* and *motive*. The object is, therefore, the thing (real or conceptual) to be transformed, while the motive represents the reason(s) behind the activity. In activity theory motives are further linked to human *needs*, but we will maintain a focus on the motive-level only. Finally, we note that activity theory is generally regarded as concerning *collective* and *social* actions, rather than those of individuals. This perspective is especially associated with the work of Engeström, whose interest is in organisational change. In our work we focus on individual activities, while acknowledging the necessarily social nature of all activity, following the view put forward by Leont'ev more closely.

Figure 1 represents the model as we use it here applied to the example of hunting. A hunter (the Subject) wishes to hunt a deer (the Object), using items such as spears (Tools) to kill it and transform it into a dead deer (an Outcome). Note that the Motive of this activity is critical: consider the difference between a motive of "hunting for food" versus "hunting for pleasure." Additionally, it should be plain that the role of the Tools in an activity is central, because they *mediate* it and can substantially alter any aspect. A bent spear, for example, will change how the hunting activity plays out, much as a new type of spear might change the hunter's motivation to one of "experimentation."

While Leont'ev did not apply his work to video games, ac-

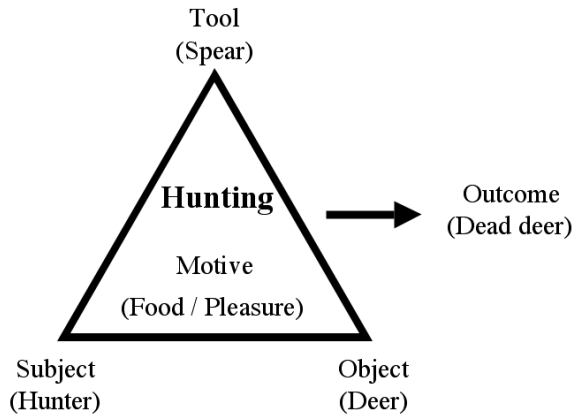

Figure 1: An activity model of hunting.

tivity theory does work very well in describing gameplay. There are two obvious ways to represent the gameplay activity within the activity model, following the distinction between the fiction of a game, and the interface or rules. First, we could model the game's fictional world, with the avatar as the Subject using in-game Tools to transform Objects, such as evil overlords, with fictional Motives, such as "revenge." Looking at the game as a piece of software, however, we could position the player as the Subject, using the Tools provided by the game's interface, such as button presses and menu selections, to transform the game itself (the Object), with Motives such as "winning" or "playing."

In this paper we are addressing the concept of *avatar* transformation, and so a third model is appropriate (figure 2). The player, as Subject, uses Tools, both those of the interface and fictional tools via the avatar, to transform the avatar, which is the Object of the activity. The key questions this model raises concern the nature of the Tools and their influence, the Motives, and the Outcomes. Understanding these elements, and their relationships is necessary to develop a complete picture of what takes place.

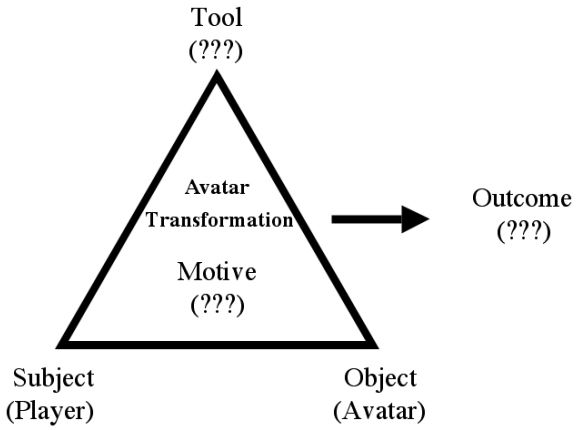

Figure 2: An activity model of avatar transformation.

The model allows us to break down the avatar transformation activity into parts and to discuss these, as well as their relationships to each other and to the gameplay activities discussed above. To apply the model, however, we need data which reflects the activity of avatar transformation.

4. METHODOLOGY

We investigate the avatar transformation process using a qualitative approach. As discussed by John Creswell [6], qualitative research is appropriate in domains where concepts are still fairly immature, existing theory is limited in scope, exploratory work is required, and the concept to explore is not well-suited to quantitative avenues, all of which apply to the domain of avatar transformation. We use the case study method, focusing on multiple forms of data and multiple cases to broaden understanding [21].

As part of a larger research project we have studied four popular and contemporary video games using the experiences of typical players as the central data source. The games studied are *Half-Life 2* (HL2), a typical first-person shooter, *Grand Theft Auto: San Andreas* (GTA:SA), the latest instalment of the famous action-adventure game, *Fable*, a combination action and role-playing game, and *The Sims 2*, a domestic simulation game. These games differ in important respects, including their target audiences, relative emphases on violence, their use of explicit narrative, and the degree to which the avatars controlled can be altered by the player.

For each game, we recruited five experienced, typical players for a total of twenty players across four games. We observed them playing while thinking aloud for an hour each before conducting semi-structured interviews for a further forty minutes. These two approaches are complementary, with observations serving to show gameplay and associated thought-processes in situ, and interviews allowing for reflective accounts. In addition to consulting the experience of players we played and observed the games and their interfaces extensively ourselves. The data yielded from these approaches are in the form of transcripts, written notes, and direct quotes from the video games themselves.

Following a typical qualitative data analysis procedure as described, for example, by Miles and Huberman [15], we first coded the textual data. Our codes centred around activity theoretic concepts such as "Subject" and "Outcome," and sub-codes within each, such as "Subject-Object Relationship" and "Learning Outcomes." These codes were then examined and collated into a smaller number of themes in order to characterise the overall story of the data.

5. RESULTS

The themes in our analysis are best addressed within the structure of the activity model already discussed. After a brief description of the gameplay activity in each game we go on to cover the subjects and objects, tools, outcomes, and motives for transformation.

5.1 Gameplay Activities

Before describing the results of our analysis, it is important to briefly characterise the gameplay in each of the four games, as this will aid in understanding the various descriptions and analyses that follow.

In *Fable* gameplay is based around taking quests, which generally involve defeating some number of enemies while navigating through the landscape. Defeated enemies provide the player with "experience points" which can be used in the Experience Menu to upgrade the avatar. The avatar can carry a variety of weapons and other items that assist them in completing quests and existing in the virtual world, including swords, magic potions, and fishing rods.

The gameplay of *The Sims 2* is a simulation of domestic life. The avatars are virtual people with "normal" lives: they need to go to the bathroom, to eat, to find a job, to meet that special someone. The basic interactions are with household objects or other avatars. The game essentially involves generating some number of Sims in a household and then leading them through their lives, with player generated goals being foremost.

Grand Theft Auto: San Andreas (GTA:SA) revolves around an open world based on a North American state. The player controls "CJ" a gang-member who has tried to turn his life around, but is sucked back into gang life. A storyline accompanies a vast number of missions the player can choose to complete, while they can also simply explore the world in a multitude of vehicles, wielding a large number of different weapons, and playing various "minigames" along the way.

In *Half-Life 2* the player takes on the role of Gordon Freeman, a nuclear physicist turned freedom fighter. The interface is that of a first-person shooter, and the player is always looking along the barrel of Gordon's current weapon. Gameplay involves progressing through the space of the world in a linear fashion, solving the occasional puzzle and killing vast numbers of enemy soldiers and aliens.

5.2 Who's Who? Subject and Object

In the avatar transformation activity the *subject is the player of the game*, sitting in front of their television or computer and manipulating the game via a controller or keyboard and mouse. The player is, most importantly, playing a game. Additionally, they have an external context, such as the room they are in, family commitments, and a social circle which likely includes players of the same game. Each player has their own personality, values, knowledge of games and genre conventions, and their own approach to gameplay generally. In the data discussed here, each player is an *experienced* player of the game and so already knows many of the details of the gameplay involved, and is highly familiar with the user-interface and narrative elements.

The *object of the activity is the avatar or avatars being manipulated*, as has been briefly described in the previous section. Experienced players are generally aware of all the possible functions of the avatar, "you can move around a bit, and you've got this reticule to aim at stuff and shoot" (HL2, P1), and are familiar with the narrative surrounding the character, "you're Gordon and you've got a world to save" (HL2, P2). The avatar may or may not be visible, depending on the represented perspective of the game, so that in *Half-Life 2* all that is visible of the avatar is his weapon, while in *Grand-Theft Auto*, the avatar is always visible from a third person perspective.

As has been discussed, the *relationship between the subject and object* is that of a player playing a game. From the perspective of the user interface, the avatar mediates the player's actions in the game world as a Tool in the gameplay activity. From the perspective of the gameplay, however, the avatar is the Subject of the activity, the player's representative within the narrative: "I'll be sitting there thinking: Hey, I'm that person. Even if I know I'm not, I've still got that small sense of illusion where you're running around: This is me, I've got to be careful" (HL2, P1). Through play, a joint history is created, sometimes leading to a personal connection between the two: "I guess if it is working and it's going well, you kind of [think]: That's my girl! [Laughs] There's a sort of positive emotion... you become slightly proud that your character is actually achieving things" (Sims 2, P5). Further, the activity of transformation itself affects the relationship between the two: "you customise him to your own gameplay or your way of playing. So it makes it a bit more of a personalised experience, rather than just some nameless guy running along" (Fable, P2). This relationship clearly influences transformations, with players generally exhibiting strong opinions concerning their avatar's appearance and activities: "The first thing I did was try and find a different set of clothing, something that would reflect my attitude or who I am" (GTA:SA, P2).

The relationship between player and avatar sets the context of avatar transformation. Transformations are influenced by the nature of gameplay and influence it in turn: what the player is trying to do, the relationship between player and avatar, and, of course, *how* the avatar can be transformed.

5.3 How Do You Do It? Tools

As was discussed in section 3, the Tools involved in an activity strongly influence its nature, changing everything from Outcomes to Motives. In fact, the Tools used most obviously change the Subject themselves, because they alter how that Subject is able to act by mediating what they do. We found that there were two major kinds of tools involved in the avatar transformation activity: those used to transform the avatar, and those used to assess the avatar both before and after transformations. We discuss these tools here, along with their sub-types.

5.3.1 Tools for Avatar Transformation

The most obvious tools of avatar transformation are the *explicit tools* built especially for use by the player *as player*. This is most obvious when we consider the basic options screens which define elements of avatar-control such as how the mouse or joystick relates to controlling a viewpoint in *Half-Life 2* or *GTA:SA*, or how the avatar will behave when left to its own devices in *The Sims 2*. Changing such options quite clearly transforms the avatar, as an interface, in fundamental ways. Beyond these meta-level tools, there are tools more connected with the gameplay, such as the "Experience Menu" found in *Fable*: "back at home base ... you run to the opposite side of the room to the teleporter and you use this menu to enhance your skills and statistics" (Fable, P1). This menu system, a common feature of RPGs, obviously stands outside the game's fiction in important ways, allowing direct access to the avatar's physical make-up, skills, and so on, although the game itself does attempt to maintain the fiction even in the menu: "With each advance you will become

more muscular and powerful" (Fable). A similar menu is used in *The Sims 2* to create new Sims, with the player able to "choose the main character ... what he looks like, how he is fitness-wise. Then you go through each one and just change how he looks, hairstyle, face, brow, eyes..." (Sims 2, P4). Neither *Half-Life 2* or *GTA:SA* obviously contain these kinds of "avatar definition" menus, instead integrating any changes to the avatar into the gameplay itself.

A second key form of tool use in the avatar transformation activity are the *virtual tools of the game world*. By selecting to wield a machine gun in *Half-Life 2*, or to buy a new stove in *The Sims 2*, the player is not only playing the game, but is choosing to alter the avatar, which is now able to fire more rapidly or cook meals, for instance. These tools, which are part of the fiction of the game world, are the most common form of avatar transformation in the games studied. In all games involving combat, for instance, some of the most important game world tools were the weapons the avatar had available for use at any given time. In *GTA:SA* and *Half-Life 2*, the vehicles used by the avatar serve as tools which modify the avatar substantially, changing the way it is able to move in the world, such as moving more rapidly or even flying through the air. Similarly, in *Fable*, a fishing rod is a tool which modifies the avatar in that it allows the action of fishing which was not available before. *The Sims 2* is an interesting case with regard to game world tools serving as avatar transformation tools because the tools used in the world actually define how the Sims can behave. Actions in the game are premised on selecting a household object and choosing an action, making these tools in a sense, *part* of the avatar. Finally, it is worth noting that all game world tools tend to alter both function (a machine gun in *Half-Life 2* leads to more efficient killing) and representation (using a car in *GTA:SA* effectively changes the avatar into that vehicle for the duration of its use).

A final category of tool is the *gameplay* itself: the avatar is often transformed simply through taking action in the world. This is trivially true in the sense of transforming the avatar's "history" for example, but more literally true with regard to game mechanics which alter the avatar based on actions. Note that these transformations are not simply side-effects, unintended by the player, but are actively pursued. In *GTA:SA*, the more the player drives their car, the higher their avatar's skill grows, so that "it actually pays off to spend a lot of time just [playing] around, not doing anything too specific, because you build up driving skill" (GTA:SA, P3). In *Fable* the avatar's appearance changes with regard to how many good or evil actions are performed during gameplay: "you're doing different things that are good or bad, seeing that slowly come up and you're getting... your character actually changing based on how good or evil they are" (Fable, P2). In *The Sims 2*, the gameplay itself revolves around simply playing the game in order to transform the avatars: "One of the cool things about this is that you go up levels, in terms of... like, she's working towards some kind of level of fitness, you can see the little bar rising" (Sims 2, P1). With regard to *Half-Life 2* it is not clear that this transformation through gameplay occurs, other than in a negative sense, with the avatar losing health through combat, which is not usually the player's intention.

5.3.2 Tools for Avatar Assessment

The most obvious tools of avatar assessment are the *statistical or quantitative measures* provided of the avatar's status. In every game, from *Half-Life 2*'s numeric measure of health to the Needs meters of *The Sims 2*, it is always possible to get a read-out of the avatar's situation. These statistics not only inform the player of the avatar's status, but also indicate potential future transformation, the bar measuring how good or evil the avatar in *Fable* makes "a valid reference point to exactly how evil your guys is or can be or whatever" (Fable, P1). The statistics establish a history of avatar transformation, such as in *GTA:SA*, where the player can find out everything from how far they have run on foot to which weapon they have the highest skills with.

Another important means to assess the avatar's status is to observe the *representation of the avatar* on the screen. In *Grand Theft Auto: San Andreas*, for example, this can inform the player of avatar function, "you lose strength until you get to a point where you're emaciated and skinny" (GTA:SA, P3), as well as aesthetics, "why has he got a pink mohawk? I so wouldn't dress him like that" (GTA:SA, P3). In *The Sims 2*, the Sims inform players of their needs not only through the meters on the screen, but through elaborate animations in which they clutch their stomachs from hunger or stamp their feet in exasperation.

A final way that players can assess the need for transformation is through the *gameplay* itself. By using the avatar as a tool, the player can get a sense of how effective that tool is, and whether it requires transformation for more effective play. In *Half-Life 2*, the question of which weapon to use is generally decided by the state of gameplay: "should probably switch to a ranged weapon because I'm sure there's enemies around here somewhere" (HL2, P3). In *Fable*, if the player's avatar is not strong enough, they will not be able to wield certain weapons that would be more effective, "if you had no strength in your character, and you were trying to use a very heavy weapon you'd kind of lay it over... [very slow]. Not very effective at all" (Fable, P3). Similarly, in *GTA:SA*, the desire to increase weapons skill is motivated by shortcomings in the gameplay when it is too low: "I suppose at the start of this San Andreas it was quite crap because you had no aim, but then you'd try to train yourself up with the weapons and... it was more fun" (GTA:SA, P4). Assessments of the gameplay's relationship to avatar transformation can grow quite complex, such as in *The Sims 2*: "I'm trying to make his Needs full before he goes to work so he can get a promotion and he can fulfil one of these Wants and Career Aspiration. So he can get to the top of the Athletic thing, as quick as possible" (Sims 2, P3).

5.4 What Happens? Outcomes

The next aspect of the activity model to be discussed are the outcomes, the results of the transformation. After the avatar has been transformed, it is important to consider what has happened, what has changed. In this section we present five basic themes prevalent in the analysis of outcomes: the avatar (both representation and function), the gameplay, impacts of further transformations, and learning outcomes.

The first type of outcome seen in the data were the *changes in the appearance or representation of the avatar*. In *Half-*

Life 2 the depiction of the avatar is altered when the avatar is transformed by using a new weapon because we see a different gun pointing out toward our enemies. In *Fable*, performing good deeds leads the avatar to have "a little halo and butterflies around you and you run into town and kids start clapping and cheering and all that type of stuff" (Fable, P2). In *The Sims 2*, having a Sim learn a new meal results in a different representation of making a meal in the game: "It's fun to see them cooking, too. If they make toast they really make toast, not just a "piece of food"" (Sims 2, P4). A further represented outcome in The Sims 2, is that the Sims actually react to transformational actions taken by the player. Thus, when a player buys a new sofa, for example, the Sims will run over to it and react in some way, perhaps clapping their hands and expressing joy.

The other outcomes of transformation directly relating to the avatar itself are the changes in its *function*. In *Half-Life 2*, again, a new weapon not only changes the representation on screen, but makes the avatar a different kind of *interface*: Swapping a pistol for a shotgun results in a different kind of interaction with the world around the avatar, affecting issues such as the range a player can shoot, their accuracy and power. Likewise, in *Fable* and *GTA:SA*, an increase in strength is not only represented in the graphics of the game, but also in the capabilities of the avatar. A stronger avatar in *Fable*, for instance, can do new things: "Now he can... carry a heavier weapon" (Fable, P1). Similarly, in *GTA:SA*: "The stronger you are the easier it is to smash people, and run faster" (GTA:SA, P3). In *The Sims 2*, because of the nature of avatar transformation in that game, adding a new TV to the household adds new actions to the Sims there, such as "Watch TV" and "Change Channel."

The outcomes of avatar transformation are largely important insofar as they affect the actual *gameplay*. The most common effect is to make the game easier in some way: "So, yeah, I just saw the new Zombies arrive again. Bit faster, which I guess the shotgun would be a good weapon for if they're close." (HL2, P1). Transforming the avatar in *Fable* using the Experience Menu means that "as the story's going parts of it are actually making it easier to play the game because you're stronger and... bigger, better, able to hit things better" (Fable, P2). Likewise, in *GTA:SA* a faster car or motorbike not only moves faster, but may be necessary to complete a mission in a particular way, such as requiring the manoeuvrability of a bike to chase down motorcycle couriers, for example. In *The Sims 2*, increasing a Sim's cooking skill not only lets them cook new meals, but also can contribute to their ability to get a promotion to a new job, earning more money, and so on.

As is partly indicated in our discussion of outcomes to this point, the outcomes of avatar transformation are closely related to *further transformations*. Part of the gameplay of these games often concerns a continuous transformation of the avatar toward some goal state. As we have already seen, for example, developing an avatar's strength in *Fable*, for instance, allows for further transformations of the avatar, such as using new weapons which are themselves a transformation, and which allow the gathering of more experience points, and so forth. The gameplay, then, revolves partly around an economy of improving the avatar. While this is especially true of an RPG like *Fable*, it also holds for *The Sims 2*, in which Sims' learning skills is chiefly related to an ability to satisfy their Needs more rapidly, to obtain promotions, more money, and therefore new objects which transform them further. The increased abilities, and new representations brought on by transforming an avatar influence the player's motivations to continue in this activity. More specifically, the outcomes of avatar transformations are most often presented as *rewards*: a better gun, a faster running speed, the ability to cook a new meal. In addition to this, the transformed avatar is often better equipped to be developed further. In *GTA:SA*, increasing the avatar's bicycle skill, for instance, increases the ability to stay on the bike, making it more attractive to ride on, and leading to further increases in bike skill.

The final component of outcomes to be discussed here are the *learning outcomes* for players. An important consideration in activity theory is the process of learning during an activity. Any time the player engages in transforming their avatar in some way, they observe the outcome and learn about the effects. Outcomes, therefore, have important learning benefit in terms of discovering what particular tools do, for instance. If, in *Half-Life 2*, the player uses a new weapon, such as the gravity gun, and sees that it is effective in particular situations, they are learning something about the gameplay of *Half-Life 2*. At a larger scale, players learn about the economy of transformation present in the game by participating in it. In *Fable*, where a player might transform their avatar with strength attributes, they observe the effects this has on the avatar, learning about this component of transformation and how it fits into the general gameplay structure of the game.

5.5 Why Change? Motives

A motive of an activity is a subject's reason for transforming the object. In studying the avatar transformation activity, we found a small set of core motives in the participants' discussion of their play. We present these motives here very briefly, acknowledging that this is an extremely complex element of gameplay and that we can only provide indications of what takes place, rather than a complete analysis.

The first motive of interest is that of *progress or achievement*. Along with the motive of *play*, discussed below, progress is generally regarded as one of the central motivators in all gameplay [1]. Most simply, players wanted to transform their avatars because "that's what you do in these games" (Fable, P5). A desire to progress and achieve those goals set out by the game itself is a very strong motive, related by one player to a behaviourist model of conditioning: "maxing out is a key thing really. Filling up bars. It's very sort of B. F. Skinner and behaviourist. Very pigeon tapping at coloured lights." (Sims 2, P1). Another player felt that it was simply a general human impulse: "you really want to fill the bar... I don't know why that is. I think that's just an underlying part of human nature, to fill the bar" (GTA:SA, P2).

A further achievement-related motive was that of *optimisation*, transforming the avatar in order to play the game the best way possible, such as having the right weapon for the right situation: "They're fast. They're hard to kill, because they're fast. And I don't have a shotgun. And I wants a

shotgun. [That would give you the edge?] Oh yes" (HL2, P5). Likewise, in *Fable*, a motive of transformation was simply to have the "ultimate" avatar who has "a vast quantity resources to draw on, whether it be special abilities of magic or whatever, or weapons... or gold" (Fable, P1). This kind of motive is most obviously driven by the game itself, which often *requires* a transformed character in order to progress through the play: "you just get slaughtered when you attempt certain quests, if you don't have a character that's appropriate for them" (Fable, P3). Nor was this solely true for combative games, as is shown in *The Sims 2* where "to advance in this career I'll need a body point. I'll need a body point to advance to the next job" (Sims 2, P3).

As much as games require achievement and progress, they also facilitate *playful exploration of possibilities*. This exploratory play was also a motivation for players in their transformation of avatars. In *Fable*, where the character can be developed as good or evil, players were interested in trying both options, to "be evil for the sake of playing the game as an evil character and seeing what options the game gives you then" (Fable, P5). Play can also motivate transforming an avatar to pursue a playful objective: "to be able to ride a mountain bike as fast as I possibly could down Mount Chilead... I'd have to go around and get my mountain bike skill up to the maximum possible level" (GTA:SA, P5). Even in *Half-Life 2*, not a game given to intentional avatar transformation, the use of different tools by the avatar is often approached playfully: "I'm just picking up these hooks because I haven't really seen them before. Always fun trying to throw new stuff, you can see what happens" (HL2, P1) Finally, in *The Sims 2*, one reason to increase cooking skill is not just to create more efficient meals, but because the variety itself is enjoyable: "If their cooking skill is higher they can cook more, other things, I have more options to choose. It's fun" (Sims 2, P4). As can be seen here, the motivation of play revolves around having as many options for action as possible, and this is often facilitated through transformations of the avatar.

A final category of motivation involved in avatar transformation were *personal motivations* that the participants brought as people, rather than as players. This meant they often had personal preferences about particular tools, such as weapons, "I kind of like using swords in these games, because I think they look better" (Fable, P4), and clothing, "the first thing I did was try and find a different set of clothing, something that would reflect my attitude or who I am" (GTA:SA, P2). Similarly, in *The Sims 2*, one female player had a strong personal preference for making attractive Sims "because it is, in a way, a representation of yourself, because you're the one playing it. I like to think of myself as a rather handsome man rather than an ugly one" (Sims 2, P5). Even in *Half-Life 2*, one player did not want to use a weapon that set fire to enemies: "I do recall at one stage not doing that any more in the game, not burning people up any more, because I didn't like the way they were [screaming]" (HL2, P4). In this case, personal feelings caused a player to *not* transform their avatar in a particular way. This was common especially with regard to moral concerns, such as being evil in *Fable*, "it just feels wrong being evil, even in a game" (Fable, P5), or even animal rights, "I don't wear sheepskin, so I can't, in my right mind, put him in a virtual sheepskin." (Sims 2, P5). A further negative motive that was frequently voiced was concern over the time could take to transform an avatar, "That's the only thing they stuffed up in this game. It takes too long to go and change your clothes and stuff" (GTA:SA, P4), or simply how hard it could be to do so: "your characters regress and it's a pain, because you have to build them back up again." (Sims 2, P1).

6. CONCLUSIONS

In this paper we have presented an analysis of the avatar transformation activity in four popular games. We have gone through the activity in some detail, covering multiple facets and drawing attention to a number of recurrent themes. The resulting description of the activity allows us to think about it in a systematic way as well as providing rich, descriptive evidence for certain themes of gameplay in the video games discussed.

A key objective in this paper has been to apply activity theory to the video game domain. The usefulness of activity theory in this context helps to validate it as an approach. As a tool for qualitative data analysis, activity theory proved extremely useful, all the way from the level of coding to drawing together themes and exploring linkages between them. In our own work we continue to use activity theory as a central way of thinking about video games and the complex network of activities involved in their play.

The research presented here is foremost intended to add to the existing literature on avatars in video games, helping to clarify how they are transformed through gameplay. We also hope the approach is of use to those researchers who are interested in new theoretical tools, as well as the potential of using rich, qualitative data in their work.

This work is also intended for developers. While exploratory, we believe that many of the insights found show promise for design. Foremost in this is the usefulness of activity theory in describing gameplay by prompting analysis of a variety of perspectives, such as Subject, Object, Motive, and so on. Most importantly, activity theory brings to light *relationships* between the elements, such as the the influence of Tools on a player's Motives, or the cycle of learning relating Outcomes back to interpretation of a Tool's influence on the Object. More generally, we hope that the qualitative observations in this paper, such as information on how players' assess their avatars, and how they relate to them, for example, may assist which designing both the avatars themselves and the frameworks for their transformation during play. Finally, we have demonstrated both similarities and differences in avatar transformation between games emblematic of certain genres which may assist in understanding design within those genres as well as providing ideas for the transfer of mechanics and aesthetics between them.

There is much more to be done on avatar transformation. The present work is naturally limited by the selection of games which, while diverse, do not represent all video games, pointing to a need for study of a larger number of games and genres. This work raises more questions than it answers, being of an exploratory nature, and there are plenty of avenues of investigation. Studies of the motives for transformation, the effect of transformation on player-avatar relationships,

and more detailed categorisations of the tools involved in transformation activities are all potential routes to take.

In game studies, it is critical to explore gameplay concepts using qualitative data, to understand player experiences and interpretations as well as the game "texts" themselves. Activity theory is a strong approach for conducting such explorations and analyses, providing a structured and theoretically-sound basis for much future work. Avatar transformation is a central component in the gameplay of many popular games. We have provided a detailed study of four games using these approaches which uncovers important themes in the activity as well as to describe it holistically.

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