Meaningful Choice as Expression of Creativity in Gameplay

A Preliminary Typology of Creative Gameplay in Videogames

Abstract

Gamification guru Yu-Kai Chou positions creativity as the ultimate motivational drive as it both addresses intrinsic motivation as well as positive emotions. Creativity and play have long been linked together and, despite many attempts to grasp them, have maintained elusive concept because their expressions have an enormous variety. Yet, creative gameplay has rarely been analyzed as a whole, research often lingering on a single variant of it, mostly tangible player production in videogames. This thesis offers a framework based on Chou's concept of meaningful choices for identifying varieties of creative gameplay and offers a preliminary typology of creative gameplay in videogames.

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INTRODUCTION

Videogames have proven to be powerful motivators. Roughly 3 billion hours are spent each week by people playing videogames (McGonigal 2010). The power of videogames to compel people to voluntarily engage in an activity that constantly presents them new obstacles, challenges and accompanying frustrations without any tangible or monetary reward attached to it has captivated many, both in academia as well as in the entertainment industry and, as the game industry has far eclipsed the music and movie industries in terms of revenue, it has also grown substantially as an academic subject ("US and" 2015; Smirke 2015; "Theatrical Statistics" 2015).

Both in- and outside the world of entertainment people have sought to analyze and harness the motivational power of videogames, either to improve upon the design of videogames, or to seek to use this power outside of videogames, a practice dubbed gamification. Sebastian Deterding describes it as "use of game design elements in non-game contexts" (2011).

Gamification guru Yu-Kai Chou has created his Octalysis model in order to gain a better insight into what makes games so enthralling, seeking to categorize the various ways in which human behavior is motivated psychologically. The model classifies eight motivational drives in groups of extrinsically or intrinsically motivated and being either black hat (inciting negative emotions) or white hat (inciting positive emotions). The ideal combination of white hat, "long-term positive emotion," and intrinsic motivation, what Chou calls the "golden corner," is the drive named "Empowerment of Creativity and Feedback," which, according to Chou, emphasizes "what most people refer to as 'Play'" (2015a, 126).

The term creativity is sure to conjure up positive associations for many but, as a concept, it is hard to grasp and define. According to Professor of Education Robert Fisher "creativity can be seen as a property of people (who we are), processes (what we do) or products (what we make)" (2004, 8). This illustrates how talking about creativity in games is a really vague way of talking about a great variety of things. Is it about the player's mindset (who we are), the actual gameplay (what we do) or created content (what we make)? If it is one of the ideal ways in which humans can be motivated, than what does it mean precisely if a videogame allows a player to be creative and how is it different from the notion of play, if at all? Is all play inherently creative; is creativity inherently playful or do the two simply overlap?

Creativity in gameplay is not a new concept, but the subject is rarely acknowledged or studied as a whole, often mentioned fleetingly as a characteristic of play, mostly focusing on single aspects of creative gameplay, of which player production is a popular one (Van Den Bosch et al. 2011; Abend and Beil 2015; Westecott 2011; Sotamaa 2010; Postigo 2007; Bronstring 2009). Customization, creation through editors, but also strategy involve creativity yet they have seldom all been connected as expressions of a larger category of creative gameplay. This is also evident in Staffan Björk and Jussi Holopainen's vast and extensive book *Patterns in Game Design,* which has a mere two-page section on "Creative Control" as a design pattern (2005, 211). As Brian Sutton-Smith explains that there are many varieties of play, and, likewise, there are many types of creative gameplay as well that, though diverse, still have common characteristics that unite them, yet also separate them from other varieties of gameplay (2006, 299).

This thesis seeks to explore the notion of creativity and its expression in gameplay in videogames, particularly from the viewpoint of Yu-Kai Chou's ideal

Octalysis drive: the Empowerment of Creativity and Feedback, which focuses on how people could be motivated and enabled to express their creativity within a game or any other activity. The research question of the thesis will be: what does creativity look like in the context of gameplay and how do videogames accommodate its expression? To answer this question, this thesis will seek to offer a preliminary typology of creative gameplay in videogames by seeking common characteristics between varieties of creative gameplay that have been studied in academic works and combine that information with a formal case study analysis of two videogames.

The first part will briefly explore creativity as a theoretical concept and demonstrate how complicated and diverse it actually is. The section will be used to establish a vocabulary for the different aspects of creativity, which will aid the subsequent videogame analyses in later sections, as well as briefly explore how the subject has been studied in game studies. Professor of Psychology and Management Mihály Csíkszentmihályi has written much on creativity although he is perhaps best known for his theory of flow, which has been of great interest to those in the game industry (2013). His combined expertise on both creativity as well as motivation makes him an excellent source for the subject. Another interesting approach is that of Professor of Technical Cognition Frank Van Der Velde, whose work in the field of computational creativity seeks to find a way to properly evaluate creativity by researching what people associate with the subject (2015). His work reveals by which different aspects creativity is recognized and can thus be helpful in constructing a framework for recognizing it in videogames. The diversity of creativity can also be seen within Chou's analysis of his creativity drive as well as the various studies that have centered on creativity in games by, among others, Van Den Bosch et al. (2011),

Abend and Beil (2015), Westecott (2011), Sotamaa (2010), Postigo (2007) and Bronstring (2009).

In the subsequent section the focus will narrow to how creativity relates to games and play. Like creativity, play is a broad and elusive concept. It will not fall within the scope of this paper to extensively elaborate on the subject, but its complexity as well as its similarity to the concept of creativity will be explored in short. Among the sources will be Thomas M. Malaby, who also problematizes the often simplistic approach that many scholars in game studies have had towards the subject (2006; 2007). He presents various ways of how play can be interpreted and also argues against the popular notion that play can easily be separated from real-life. This has consequences for what type of methodology should be used. Furthermore, both Johan Huizinga and Miguel Sicart mention creativity and play in the same breath, Sicart arguing that play itself is creative (1949; 2014, 17). This section will show some of the similarities and interconnectedness of play and creativity yet still present creative gameplay as a unique category, and begin to present a theoretical framework through which to analyze creativity in games. The foundation will be Chou's own definition of his creativity drive, which focuses on "meaningful choices" (2015a, 136). This will be established further by the work of Katie Salen and Eric Zimmerman, who have written on the concept of meaningful play in the context of games in their famous book *Rules of Play – Game Design Fundamentals* (2003). Furthermore, Roger Caillois' distinction between "paidia" and "ludus" play, which refer to free-form and more rule bound play respectively, will help to see if creativity in games varies in nature in these different play styles (2001). It will also aid in demonstrating how meaningfulness can mean different things in various gameplay situations. The study of creativity in videogames will be limited to expressions of

creativity in gameplay within the gamespace, so that would exclude creative references hidden by the game designers or creative ways to use a controller for example.

In the final section, two videogames will be analyzed: *LittleBigPlanet 2* (2011) for the Playstation 3 and *NBA 2K15* (2014) for the Playstation 4. These titles were chosen because they appear vastly different on the surface, one a playful side-scrolling platformer, the other a sports simulation game, to demonstrate that creative gameplay is not limited to the so-called creative games and that it can be present in two vastly different genres. *LittleBigPlanet 2* is often labeled as a creative game and is marketed as such, so it is an excellent case to see how its gameplay fosters creativity. On the other hand, *NBA 2K15* will not quickly be mentioned in the same breath as *LittleBigPlanet 2* for enabling creativity, although it also exhibits some clear creative functionality. Here, the previously established theoretical framework will be used to reveal various degrees and varieties of creativity in these games.

As a method, a formal analysis will be used, as described by Petri Lankoski and Staffan Björk, where the "operational and constitutive rules," as well as the "components," "goals" and "player actions" of the games will be defined and analyzed through the lens of creativity (2015, 24, 25, 26). To elaborate, the components, or interactive objects, and actions available to the player in the game will be identified and analyzed to see what type of 'meaningful' behavior they could allow for. Analyzing the goal and reward structure will be key to see how creativity in gameplay is more connected to ludus or paidia play, or perhaps both. Seeing what is rewarded is also necessary for describing the various ways 'meaningfulness' can be interpreted in the games.

Because the method focuses on the formal aspects of videogames, it will be difficult to substantially explore the more subjective, personal side of creativity from the perspective of the player. This will make it unfeasible to draw a sound conclusion on the possible influence that, for example, the aesthetic elements, like the visual style, of a game can have to foster a spirit of creativity and strengthen the core drive of Empowerment of Creativity and Feedback. Nonetheless, it is possible to analyze whether the gamespace allows and/or stimulates emotional attachment and subjective interpretations of creative behavior or player's creations through the various player actions that are available. The strength of the method will mostly be evident by revealing the interplay between game components, player actions and goals, which will hopefully give an insight in the level of possibility for creative play in a game. However, it could prove that successful utilization of this core drive does not necessarily reside in the possible actions that the game allows for but more in its visual style or that it is entirely dependent on the player's mindset.

All in all, this thesis seeks to gain a better understanding of the various ways creativity is facilitated within gameplay in videogames, especially because of Yu-Kai Chou's interesting claim that it is the ideal motivator through intrinsic motivation and positive emotions, and because creative varieties of play have rarely been explored and analyzed as a whole. It is the aim of this paper to offer a preliminary typology of creative gameplay in videogames.

IN THE BEGINNING…

The Oxford English Dictionary defines creativity as follows, “having the quality of creating, able to create,” and/or “relating to, displaying, using, or involving imagination or original ideas as well as routine skill or intellect” (2010). Creativity holds a special place in the minds and culture of people, apparent from the important role that creation plays in many of the world’s religions, literature, film, music and the visual arts, but also in the business world in the form of creative problem solving, also called lateral thinking (Bono 1990). It is an admired and desired trait or ability that often maintains a sort of mysterious quality. Robert Fisher acknowledges that despite much research, creativity remains “ethereal and elusive” (2004, 7).

One of the first associations with creativity is often the ability to create something. Whether that be a song, a novel, a knitted hat, a collage or an inventive solution. Creation is, in a way, combining various existing elements, often with the help of certain tools, to make something else, something new.

Two key elements that always appear to be necessary for creativity are a creator and a creation. This reflects Dr. John G. Young’s observation that creativity can be seen from two perspectives, “what creative persons are,” and “what creative persons do or make” (1985, 77). The first perspective presents creativity as a state of mind, which explains some of its elusiveness, whereas the second perspective recognizes that the creative mind spawns something, either intangible such as a music performance (do) or tangible like a statue (make). Young summarizes the concept by stating, “creativity is the paradoxical integration of doing and being” (1985, 77). It is also clear that the second perspective of creativity, which highlights the created

artifact or performance, is derived from the first; there can be no creation without a creator.

Within game studies, the focus has often been on the second perspective of 'Doing/Making,' and, more specifically, on tangible player production through editors, categorizing editor creation play-styles (Bronstring 2009), researching dynamics of co-creation (Abend and Beil 2015) or the role of creation in player participation (Sotamaa 2010). Hector Postigo explored the role of the modding community in the game industry, offering a taxonomy of modders based on what they created, "maps, mods, [or] skins," but he also shed some light on Young's other perspective of 'Being' by revealing the motivations of modders (2007, 301). One of his respondents compared his level building skills to "a form of technical art … like a painter has his canvas and paint pallet" (Postigo 2007, 309). Similarly, Van Den Bosch et al. did a study into the motivations of creation through game editors, also focusing more on the perspective of 'Being' (2011).

However, creativity cannot only be seen from two perspectives, a creator and a creation, but also as a process originating from the former and culminating in the latter. As Robert Fisher's observation referenced earlier suggested, creativity can be seen in "people," "processes," and "products" (2004, 8). This is also apparent in Emma Westecott's analysis of *LittleBigPlanet* where she revealed how the game invites and incites creative play by referencing to "real world craft practices" in its design, "[shrieking] craft throughout its construction," and by placing the game in a "broader cultural setting" of creativity (2011, 98, 94, 96). Still, while this gives a broad idea of where creativity might be found, it is not yet clear what it might look like from either perspective and how it could be distinguished from the non-creative.

That is where Frank Van Der Veld et al.'s work in computational creativity could help to focus and frame the analysis of this subject. They have sought to create a "semantic map" of words mostly associated with creativity in academic literature in the field of computational creativity and other academic fields mentioning, but not studying, creativity as well as a word list obtained through a word association test in order to "empirically derive terms which can be used to rate processes or products of computational creativity" (2015, 94). The authors derived five different "dimensions" of creativity from their data: "Original," "Emotion," "Novelty/Innovation," "Intelligence," and "Skill" (2015, 100, 97). Van Der Velde et al. support the idea that these dimensions can be used to evaluate whether something is seen as creative by people: "if the clusters in the semantic map reflect the notions that humans have about creativity, they would also determine the way they evaluate creativity" (2015, 100). The different dimensions help to frame how people are likely to evaluate and recognize creativity, yet, at the same time, they demonstrate the diversity and ambiguity of the subject.

Mihály Csikszentmihalyi makes an interesting point about the evaluation of creativity by saying, "creativity does not happen inside people's heads, but in the interaction between a person's thoughts and a sociocultural context" (2013, 23). With this statement, he seems to emphasize the variety of the creative process, but also that the context plays a major role in valuing and recognizing creativity, particularly related to the dimensions 'Original' and 'Innovation.' Fisher also acknowledges that and differentiates three degrees of originality: "individual," "social," and "universal," meaning that the originality of something can be recognized by the individual, a "social group, community or organization" or "being original in terms of all previous known human experience" (Fisher 2012, 9). Innovation and originality is what sets

creative production apart from mere generation, according to Fisher (2012, 8). Because of the chosen method, the analysis will only be able to reveal whether social components are available to the player but not necessarily how exactly these play a role in creative gameplay or whether the social context is important to foster a creative mindset among players.

The evaluative dimensions can also be seen implicitly in Chou's description of the drive of Empowerment of Creativity and Feedback. He argues that the power of the drive can be seen when players can "derive an almost limitless number of possibilities," referring to the dimensions of 'Original' and 'Novelty/Innovation' (Chou 2015a, 131). This connection is also apparent in his example of Lego building, in which he emphasizes "a practically infinite number of combinations" that was possible (Chou 2015a, 126). The dimension of Skill is featured in his exploration of the strategic skill of professional Starcraft players who have "APM [Actions Per Minute] numbers between 300-400," highlighting their impressive ability to quickly execute their creative strategies. And, finally, in his example of chess the dimensions of 'Intelligence' and 'Emotion' can be seen as he argues that the game's creative value is a combination of "memorization and calculation," but also "creativity, intuition and understanding," adding that a play style can be "harmonious and elegant," or "aggressive," reflecting "personality" (Chou 2015a, 134, 135, 136). While the dimensions help somewhat to see why people view something as creative, they also demonstrate the complexity and great variety that creativity can display. This is also apparent in Chou's examples, which range from free-form Lego building, to the meticulous games of Starcraft and chess, to musical stairs and drawing games. So, while he speaks of one drive of Empowerment of Creativity and Feedback, it

quickly becomes evident that envisioning or recognizing creative play derived from that drive might not be so simple.

CREATIVITY AND MEANINGFUL PLAY

While the evaluative dimensions offered by Van Der Velde et al. can be seen in Yu-Kai Chou's examples of creativity, Chou also describes another important element for creative play, namely the term "meaningful:" "provid[ing] users with enough meaningful choices that they can utilize drastically different ways to better express their creativity, while still achieving the Win-State" (2015a, 136). It is interesting that Chou chooses to describe creativity in games in this manner, for often the focus of creativity in games in the area of game studies has been limited to exploring and analyzing the ability to create through tools or level editors, and avatar customization options, or, in short, more tangible expressions of creativity (Abend and Beil 2015; Van Den Bosch et al. 2011; Sotamaa 2010; Ducheneaut et al. 2009). They reflect Chou's examples of building with Lego, a focus on tools and the created artifacts derived from them as well as personal expression, but not his strategic examples of creativity which center on this concept of meaningfulness and problem solving. Although mostly focused on aesthetics and visual design in her study, Westecott briefly refers to yet another type of creative play in *LittleBigPlanet* likened to "digital puppet theatre," which also has a link to avatar customization (2011). Although very diverse, an in-depth analysis can reveal what similarities there are for all these types of creative play, which will aid in constructing a theoretical framework.

If creativity in play is going to be analyzed, then it is important to briefly explore how the two are related. Like creativity, play is hard to grasp as a concept. Katie Salen and Eric Zimmerman indicate, "games are a subset of play," a "formalized" version of play (2003, 303). They offer a broader definition of play as "free movement within a more rigid structure," arguing that play is possible because a

fixed set of rules or restrictions allow for a specific sort of movement, but also that it is a "state of mind" (Salen and Zimmerman 2003, 304). Similarly, Thomas Malaby argues that it is much more useful to view play not as "a separable human activity" but "as a label for a *mode of experience*, a way of engaging the world" (2007, 102). In a manner, it is similar to Young's two perspectives on creativity, one emphasizing an intangible, the other a tangible side. Likewise, interaction with rule systems and structures only becomes play if accompanied with the mindset of play.

If play can be seen as movement in a rigid structure, a way of exploring options within limitations, then it would not be far-fetched to view it as a precursor for the creative process, where a person seeks to create something new by combining available options, or, as one could almost say, *playing* with available options. Salen and Zimmerman actually view this as a natural part of play, stating that "play exists *because* of more rigid structures, but also exists somehow in *opposition* to them," emphasizing that play, especially in a broader sense of being playful, opposes the status quo; it deviates from normal behavior, seeking and creating new behavior and possibilities within existing rule structures (2003, 304). Johan Huizinga seems to support a similar conclusion when he argues "Plato understood creativity as play" (1949, 162).

However, while creativity might be playful, and play is thought to have inherent creative qualities, not all forms of *game*play are necessarily creative. Miguel Sicart argues that "play creates (itself) through objects, rules, players, situations and spaces," and, indeed, by playing, a world is created with different rules and conventions (2013, 17). Nonetheless, within the specific form of play called gameplay, where "players follow the rules of the game," this creation is already accounted for; the rules and objects are predetermined by the designer (Salen and

Zimmerman 2003, 303). Moreover, even though play as a phenomenon has this creative quality that creates imaginary worlds and behavior, it does not mean that the subsequent gameplay actions and the choices *within* that world of rules allows for creative expression. On the contrary, they might be extremely narrow. If the children's game musical chairs could be used as an example, play indeed recreates the interpretation of chairs as well as music, which have now become indicators of success and cues for action, but the actions available to the player are very limited: walk around and sit down when the music stops. Any other approach than trying to sit as quickly as possible is punished by the game's rules.

When looking at Roger Caillois' categorization of play and games, two of the four forms, "illinx," play forms seeking physical sensation (like a merry-go-round for example), and "alea," games of chance, are not creative at all in their purest forms (Caillois 2001, 77). As in the example of musical chairs, even within "agon," competitive games, many examples can be found that lack creative gameplay such as most of the mini-games in *Mario Party 5* (2003), which are often competitive button-mash games where the player has to hit a button as quickly as possible to win. Similarly, there are many games focusing almost exclusively on the reflexes of the player with extremely limited input capabilities and unforgiving rule structures that allow for practically no creative gameplay, such as *Temple Run* (2001). Caillois himself also remarks that not all of his game categories are "equally creative" (2001, 67). Therefore, creative gameplay can be seen as a category separated from other forms of gameplay.

To return to the notion of meaningfulness or usefulness in regards to creativity, Csikszentmihalyi also argues that it is indeed a key aspect of creativity as he defines it as "to bring into existence something genuinely new that is valued

enough to be added to the culture" (2013, 25). Here he stresses the importance of (outside) evaluation, but it is unclear how this would translate to creative play in videogames. The importance of outside evaluation will not be studied in this thesis as it falls outside of the chosen method. Likewise, the subjective evaluation and experience of the player himself can also not be explored for the same reason.

Still, Csikszentmihalyi emphasis on value could translate to gameplay experience as well. If Chou's interpretation of "[trying] different combinations" and "meaningful choices" can be taken as a starting point, then it becomes clear that this definition hinges on the interpretation of the term meaningful in the context of a game (2015a, 136, 26). Salen and Zimmerman define meaningful play descriptively as "the process by which a player takes action within the designed system of a game and the system responds to the action," and evaluatively as "when the relationships between actions and outcomes in a game are both discernable and integrated into the larger context of the game" (2003, 37). Chou explains this similarly by saying that, "your choices create a tangible difference in your gameplay, and it shapes how the experience evolves over time" (2015a, 257). A meaningful *choice* within the game system would then at least contain these elements, which refer to the importance of feedback mentioned in Chou's drive.

Implicit in Chou and Salen and Zimmerman's work is that meaningful play strives towards a goal and that the valorization is given by the game, or, more precisely, its rule and reward structure. Chou himself argues for a goal-oriented approach to creativity: "it is important to create a setup where your user is given a goal, as well as a variety of tools and methodologies to strategize towards reaching that goal" (Chou 2015a, 136). Van Den Bosch et al. similarly concluded their research into players' motivation to create in games by saying, "the act of creation is probably

in most cases goal-oriented and as such can be seen as a challenge" (2011, 7). The notion that "productivity" is the main reason for creating has been disputed by Kate Compton and Michael Mateas, who distinguish between "task focused creativity," and "autotelic creativity tools, which privilege the enjoyable experience of explorative creativity" (2015, 228). This merely shows the need to gain a better grasp on the varieties of creative play for a proper analysis of the subject.

For example, Marek Bronstring has defined four types of "Player-Creators" that all vary in play style (2009). He specifies "Builders," who "tend to pre-conceptualize their creations," and "Destructors," who "want to construct things first and then mess them up," which appear more strict than the "Imaginers," who "improvise with the tools … and see where it leads them," or the "Experimenters," who "desire to test the limits of the tools or game world" (Bronstring 2009). This demonstrates that even within a specified type of creative play, creation through game and level editors, players can be more goal and challenge oriented or more free-flowing.

If meaningfulness can be linked to attaining game goals then it is important to see how those goals could be established. The type of play is influenced by goal structure, and the meaningfulness of an action therefore depends on what the goal is for the player. Here, Roger Caillois' famous division of play into the formal and rule bound "ludus" and free form, spontaneous "paidia" variants helps to distinguish the various ways in which that goal could be formed for the player, and it helps to distinguish between Chou and Van Der Bosch et al.'s notion of challenge oriented creation versus Compton and Mateas' explorative creativity (2001).

In ludus types of play, the goal and meaningfulness are derived from the reward and penalty structure in the game. Jonas Heide Smith defines this as the

"objective goals" in the game: "goals set up by the game designer, i.e. game states which the manual might state that the player is meant to achieve" (2006, 19). This also overlaps with Björk and Holopainen's definition of "Predefined Goals," which "require that explicit boundaries be set by the game design to what game states are considered successes" (2005, 310). Since this goal is connected directly with the win state of the game, creativity in ludus types of play will most probably be related to challenge as Chou and Van Den Bosch et al. propose. Chou also indicates that lacking a clear goal can cause users to be demotivated, "because they don't understand the purpose of the activity" (2015a, 136).

A clear example that Chou also uses would be the game of chess (2015a). The objective goal would be to checkmate the player's opponent, and at every turn, the player could go through the creative process of gaining an idea ('Novelty/Inspiration'), executing it ('Skill'), and creating a new play situation ('Original'). The most important part would be that the action is well integrated into the game, or as Salen and Zimmerman put it: "an action taken at one moment will affect possible actions at later moments" (2003, 35). It is not just that it is possible to explore new options, it is *necessary* to accomplish the objective goal of the game, as becoming predictable would leave the player at an disadvantage against a seasoned opponent. Going through the creative process in chess could be seen as the player exploring and setting "Supporting Goals," which are goals that "help or make possible the completion of the main goal" (Björk and Holopainen 2005, 330). If these Supporting Goals are "Player Defined Goals," which means that the player can "create or customize" them himself, rather than being told by the game system, then this could allow for ludus-based creative play (Björk and Holopainen 2005, 317). This might be positioning a specific chess piece on a strategic spot, or take a chess piece of

the opponent. Both moves would only indirectly be related to the objective goal of checkmating the opponent's king. Chou describes this as "[utilizing] drastically different ways to better express … creativity" in pursuit of the objective goal.

The manifestation of creativity in these ludus type of games relates somewhat to Jonas Heide Smith's concept of a game's "strategicness," which is the "measure of the interdependence between players and of the strategic freedom of these players," where the latter, dubbed "strategic range," which mirrors Chou's concept of meaningful choice, is the strongest indicator of a game's creative potential (2006, 145). This type of creative play is most easily interpreted from the perspective of 'Being,' since the focus lies on the mental process of finding innovative solutions that are possible within a game's rule structure. This could simply be a change in the game state, like in chess, or it might create a tangible, visible creation, like an army base in a strategy game, but its value lies purely in its effectiveness in reaching the objective goal and not in its aesthetic quality. The dimension 'Original' would in this case mostly be attributed to the uniqueness and inventiveness of an action rather than the created artifact.

However, when approaching creative play from the perspective of paidia play, a very different picture emerges, more akin to Compton and Mateas' free-form creative play. Compton and Mateas do recognize the value that (external) goals can have by giving direction, but they argue that "it is better to encourage the user to develop their own internal goals," which would be more paidia related play (2015, 230). As paidia is "common to diversion, turbulence, free improvisation and carefree gaiety," it is indeed often not seeking to fulfill the objective goals of the game but is rather guided by the, often spontaneous and vague, subjective goals of the player (Caillois 2001, 13). Björk and Holopainen define these as "Optional Goals," meaning

they do not directly "advance the player's progress towards the primary goals of the game" (2005, 314). The most important distinction between the previous example of ludus play is that the player chooses Optional[1] and Player Defined Goals that are *not* Supporting Goals. So, the goals are not chosen because they help accomplish the objective goals of the game but for personal reasons of the player, or, as Compton and Mateas put it, "creativity as an intrinsically pleasurable activity" (2015, 288).

In order for paidia play to be meaningful, the player's choices would still need feedback from the game system, meaning that the player receives a visual response for his actions or decisions, but, in order for the choices to be truly free, it should be largely disconnected from the game's reward and penalty structure. Whether a choice is meaningful will depend entirely upon the subjective interpretation of the player, rather than its relation to obtaining the objective goals the game. This is probably why Chou advocates challenge related creativity, because in paidia play, the motivation to be creative needs to originate solely from the player himself. So, if paidia play is to become creative, it will probably rely heavily on the emotional satisfaction that the player derives from the game's feedback. This relates back to Bronstring's Imaginers, who build objects and worlds on the fly, as Compton and Mateas would put it, not for "the quality of the final product", but because it is "fun to make," but also to Westecott's observation of creative playfulness in *LittleBigPlanet* through framing the "player-character as [a] doll," through which the players "get the opportunity to express themselves" (2009; 2015, 228, 229; 2011, 97). Compton and Mateas have dubbed systems that enable this type of creation "Casual Creators" (2015, 229).

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[1] *Optional Goals could also be formulated by the game itself but then they would function as objective goals because the game rewards the player for accomplishing them, making it a ludus, task-based activity rather then an autotelic paidia activity. In this thesis the term Optional Goals will be used to indicate Player Defined Optional Goals.*

It should be clear that the distinction between ludus and paidia is not always as clear during actual gameplay situations. Despite not trying to achieve objective goals, players' free-form play can become decidedly ludus-based through their own rule formation. Similarly, ludus play can move towards paidia despite tight reward and penalty structures if a player does not view the penalty as such. This falls outside the scope of what a formal analysis can support, but it is interesting nonetheless and this interplay and tension between ludus and paidia could perhaps play an interesting role in players' desire for creative play, which could be an interesting avenue for further research. In this thesis the ludus and paidia distinction will be used solely from the perspective of whether the type of creative play emerges from the goal and reward structure offered and/or enforced by the game, or that it emerges from Player Defined Goals that deviate from a game's objective goals.

To begin to establish a theoretical framework to analyze creative play, both its paidia and ludus variants, the following elements can be distilled from the literature: (1) Meaningful Play, (2) Diversity of Options, (3) Meaningful Choice and (4) Ability for Original Outcome.

Meaningful Play stipulates that the game should give the player clear and discernable feedback. This is clearly necessary for a game to be usable, as Salen and Zimmerman explain, but it also applies to allowing a player "to be creative and see immediate results" as Chou demonstrates in his example of building with Lego blocks as well as explicitly mentioning feedback in his creativity drive (2003, 34; 2015a, 126). Compton and Mateas also support the importance of "instant feedback" to support "direct manipulation and reflection-in-action" (2015, 231). Furthermore, Salen and Zimmerman add to this that actions should influence later gameplay

decisions, or according to Chou, they should "[shape] how the experience evolves" (2003, 35; 2015a, 157).

Diversity of Options is a common theme emphasized in the literature. Abend and Beil describe *LittleBigPlanet*'s editor as having "a unique and ample aray of functionalities," and they portray the creative options as "involves mashing-up existing content, combining provided building blocks" (2015, 3, 4). Chou also assumes a variety of options when he describes the ideal creative process as a "limitless number of possibilities" (2015a, 26, 131). Ducheneaut et al. also commented on an avatar customization tool being insufficient for the players because of a lack of options (2009).

Meaningful Choice forms the core of Chou's approach to creativity that is often not mentioned or recognized in the work of other academics on creativity in play because it is less evident in the oft studied editor tools, although Van Den Bosch et al. implicitly refer to it by labeling creation as goal-driven (2011). Meaningfulness can differ according to the style of play, but an option should meet "functional and [/or] aesthetic criteria" to help the player accomplish a subjective (chosen by the player) or an objective goal (defined by the game's rules) (Compton and Mateas 2015, 229). Subjective (or Player Defined) goals can be divided in Optional Goals[2] (chosen regardless of any objective goal) and Supporting Goals[3] (chosen to accomplish an objective goal). This means that it will be virtually impossible to project all variants of creative gameplay, especially paidia variants driven by

[2] *Technically, according to Björk and Holopainen's definition, a Supporting Goal could also be seen as a sub-category of Optional Goals. In this thesis the distinction is made between the two to stress their relation to the objective goals of a game.*
[3] *It should be noted that a Supporting Goal could also be non-subjective, but that would automatically make it behave like an objective goal as the player would have no choice but to accomplish it. Therefore, in this thesis, a Supporting Goal will always be seen as subjective.*

subjective, mostly optional, goals, also because of the limitations of the formal method. In theory, practically anything *could* become Meaningful Choice as long as it is interpreted and experienced as such by the player; however, by analyzing the game components and player actions it will be possible to hypothesize *likely* subjective goals.

Ability for Original Outcome specifies that meaningful choices can lead to a wide variety of outcomes. This element is most instinctively associated with creativity and prevalent in the literature, seen in Van Der Velde et al.'s evaluative dimensions of 'Novelty/Innovation' and 'Original,' in Sotamaa's admiration of the unique applications of *LittleBigPlanet'*s level editor, but also in Compton and Mateas' stress on a large "possibility space" as well as the importance of "the surprising quality" of creative expression (2015; 2010; 2015, 229).

As briefly explored above, because of the diversity of the nature of play, this could still yield different manifestations of creativity in a game. Still, these basic elements can form a lens through which to analyze creativity in videogames. In the following section, *LittleBigPlanet 2* and *NBA 2K15* will be analyzed from this perspective to see what various types of creativity can emerge from gameplay.

A Note on Meaningful Choice

What makes the analysis of creativity in games problematic, even through the lens of the proposed elements, is that it is often hard to distinguish when the player truly has a choice that can become meaningful. For example, in every game that allows two or three-dimensional movement, theoretically, every slight variation in position is new, and every 'choice' to move forward ever so slightly could then be termed meaningful, if the objective goal is to get to the other side. Especially in three-dimensional games,

the player could zigzag and move across a plane while moving to the other side and every time could be a different and ‘original’ route, but, probably, the player would not feel very creative.

To solve this, the problem should be viewed from the perspective of how a subjective goal of moving in a certain pattern *improves* the player’s position to attain the objective goal. In other words, whether it can be interpreted as a Supporting Goal. While evaluating whether any choice actually improves a player’s position can be more or less subjective, depending on the type of feedback the game gives to the player, what matters is the perception that it does (see Smith 2006, 73 for an elaboration on scoring feedback in games). A player is unlikely to see any significant positives in taking any other route than the shortest and zigzagging will not improve his likeliness of attaining the objective goal. So, while there is a huge diversity of options, there is really only one meaningful choice: cross the plane.

METHODOLOGY

As mentioned before, a formal analysis will be used as a method. Fernández-Vara indicates that, for games "the formal aspects refer to the system of the game and its components (the rules, the control schemes), as well as how the system is presented to the player (interface design, visual style)" (2015, 16). In this analysis the focus will not be on the visual style but on the components and the possible interactions that are derived from the rule structure. Lankoski and Björk indicate that there are three "primitives" of games that can be described: "components," "actions," and "goals" (2015, 25).

Components are "the game entities that can be manipulated by the player or the game system" (Lankoski and Björk 2015, 25). Since the analysis of creativity in gameplay focuses on the player's actions, only the components that the player can manipulate will be described in depth, and particularly those that allow diversity of interaction. This could include the player's avatar, but also objects or items that the player can interact with either through his avatar or in the game interface, but it will exclude components that the player cannot control, like the physical elements that make up a level, enemies or moving obstacles.

Furthermore, the same will be true for the description of the actions; mostly "player actions" will be analyzed (Lankoski and Björk 2015, 25). Player actions should not be viewed as 'what the player will do,' but more from the perspective of 'what the system enables a player to do' which correlates to the concept of affordances. Abend and Beil explain affordances in relation to gaming as follows: "affordances constitute opportunities for action which are deduced from the functionally relevant and invariable properties of an artifact but depend on the

subject's abilities to make use of these properties" (2015, 5). So, an example of a player action would be that the player can run, jump or shoot. Together these primitive actions might amount to a whole complexity of actual in-game player activity, but the method focuses on merely describing the primitives, which can already demonstrate the possibility for a variety of (combinations of) actions without necessarily describing or determining every possible action in detail. Looking at actual player behavior is not necessary for the aims of this thesis and it would require a vastly different method.

The objective goals of the game will be defined as the goals that are connected to rewards, which "can be in the form of game components and values in the game state," as well as unlocking new areas in the game (Lankoski and Björk 2015, 26). Likewise, the Supporting Goals will be identified by analyzing the effect and importance of player actions in relation to the objective goal, whether they are necessary in order to accomplish the objective goal. The Optional Goals can be identified as well in relation to the objective goals, in this case by analyzing whether player actions are disconnected and separate from the objective goals of the game, or, in other words, whether performing them rewards or advances the player towards achieving the objective goals or not.

Likely Optional Goals and Supporting Goals can thus be hypothesized through the available player actions in the game. This will help in identifying what gameplay behavior falls under the ludus or paidia category. Ludus gameplay will be defined as player actions guided by objective and Supporting Goals and paidia gameplay as player actions guided by Optional Goals. As mentioned before, Supporting Goals and Optional Goals that have been pre-defined by the game (rather than being formulated by the player) will be seen as objective goals as they facilitate task-oriented instead of

autotelic creativity and thus fall similarly under the ludus instead of the paidia category.

When the primitives are defined, the analysis will continue by studying whether the components, actions and goals allow for the previously proposed components of creative play: Meaningful Play, Diversity of Options, Meaningful Choice, and Ability for Original Outcome. The formal analysis will be conducted by actually playing the game as advocated by Espen Aarseth (2003). Playing will be done from the perspective of Björk and Holopainen's "Experimenting" gameplay style, which is described as "performing actions to learn how the rules of cause and effect work in a game" (2005, 164). They also add that through play testing one "can detect unintentional and emergent game design patterns," which might indeed often be the case with some types of creative gameplay (Björk and Holopainen 2005, 43). This way, the hypothesized Supporting and Optional Goals can at least be tested by the researcher to see whether they indeed could be likely goals. Nonetheless, of course this will still not give a complete and exhaustive list of possible subjective goals, but it will give a little more substance to the possibility of the proposed subjective goals.

Formal analysis cannot predict what subjective goals players will create for themselves, but it can demonstrate what subjective goals are facilitated by the possible interactions with components and available actions. So, it could still reveal which subjective goals could likely be formed by the player that would stimulate creative play, although it will obviously not be a complete and exhaustive list of the possibilities. From the available components, actions and goals, I will attempt to isolate different types of creative gameplay, which will be discussed more in-depth and related to previous work after the analyses.

CREATIVE PLAY IN *LITTLEBIGPLANET 2*

LittleBigPlanet 2 (From now on referred to as *LBP 2*) is the sequel to the popular and playful 2.5D platformer that preceded it and it delivers on its tagline promise of "Play Create Share." Featuring an extensive level editor that allows players to create even non-platform games coupled with a thriving online community, which has produced over 9.5 million levels, *LBP 2* has become more than a simple platform game, actually becoming a tool and platform for player production ("LBP.me" 2015, Sotamaa 2010). Part of the reason for its sustained success is that the game allows for the expression of the creativity of its players in free and playful ways, perfectly fitting Compton and Mateas' mold of Casual Creator. This analysis will highlight the different manners in which creativity can manifest itself in gameplay by looking at the components, actions and goals that are available to the player. Since subjective goals cannot be derived from the rule structure completely, likely subjective goals will be hypothesized based on available actions and components.

When the game starts, there are several components visible. First of all, there is the player pod, which is a small room where the second component, the player's avatar, dubbed a sackboy, is introduced. The pod computer, which has the shape of a Playstation 3 controller, is also visible in the middle of the room. The actions available to the player can be divided into several categories: (1) customization, (2) movement (running and jumping), (3) direct interaction (grabbing objects, and, later on, manipulation of gadgets, weapons and the pod computer), (4) expression (moving the sackboy's head, arms, hips and controlling emotions), and (5) level editing/creation.

The customization actions are facilitated by a small menu that the player can access at any time during the game called the popit. The popit reveals a host of new components and actions in its menu items that can be manipulated and accessed by the player. The first subsection is called 'Customize Character' and it presents several components that are aspects of the players avatar that can be modified, like the sackboy's basic materials, eyes, glasses, hair, head gear, moustache, mouth, feet, hands, legs, torso, waist and color. The player is free to choose and combine several elements to customize the appearance of his sackboy. Van Den Bosch et al. (referring back to Raessens and Goldstein) label this "reconfiguration … the manipulation and reorganization of in-game elements" (2011, 3). These activities are not objective goals in the game; the player is not rewarded for changing his appearance. Neither are these activities Supporting Goals, they do not help to achieve the objective goals. It is rather seen as a reward in itself, as progressing through the main story unlocks more items for customization.

This is the first and premier way in which *LBP 2* allows for creative play. It allows Meaningful Play, because the player gains immediate feedback upon his choices and even sees his avatar responding and sometimes admiring the change in apparel. The choices do not impact further actions in the game, so its value is purely aesthetic, which makes the activity an Optional Goal. The player has enormous Diversity of Options with the different categories each filled with many items, which only increase as the player progresses throughout the game. Obviously, there is also Ability for Original Outcome through combining these basic "building blocks" (Chou 2015a, 157). Because customizing is neither an objective goal nor a Supporting Goal in the game, as the player could complete the single player experience without customizing his avatar once, this form of creative play would have to be paidia play

driven by Optional Goals, or, in Compton and Mateas' words, it would have to be "autotelic creativity" rather then objective goal oriented creativity (2015, 230). Meaningful Choice would thus be dependent upon the subjective, Optional Goal of whether the player would like to customize his avatar.

An option in the game that facilitates the formation of such a subjective goal is that the player can save, name, heart (similar to Facebook's 'like' function), describe and group his created costumes. These options can generate a sense of ownership for the player, also a powerful motivational drive according to Chou, and since he can display his avatar in online play, it gives him an incentive to be original (2015a). Again, from the perspective of the formal method, it can only be noted that such behavior is facilitated not whether it is actually an important motivator. Nonetheless, Abend and Beil also acknowledge the importance of "online platforms for sharing user-generated creations," and Sotamaa speculates that the easy online exposure may be the biggest driver in "[stimulating] creative motivations" (2015, 2; 2010, 3).

This type of creative play can be called 'Personal Customization.' It is a form of paidia play that allows players to form Optional Goals to combine various existing options to create something new, which does not have a direct impact on the gameplay other than its aesthetic quality and emotional value attributed to it by the player. Chou also gives an example of this creative play type, where Farmville players use crops to 'paint' their farm, purely to express themselves (2015a, 155). Sotamaa and Westecott also recognize it, and Ducheneaut et al. have conducted an entire study into how and why people customize, so the play type is well represented in the academic literature (2010; 2011; 2009).

Another example of 'Personal Customization' in the popit menu is the 'Stickers & Decorations' section, where the player can choose from a variety of

stickers and objects, which are also unlocked by progressing through the game's story, that he can freely place in his pod, in a level or even on his sackboy. Further possible actions are that the player can rotate and resize the stickers and objects. Like the 'Character Customization' section, (re)placing stickers and decorations allows for all the elements of creative play through the almost endless possibilities of combining various elements (even more diverse because of the option for spatial and size variety). Meaningful Play is present through the immediate feedback of moving, resizing and placing the objects and stickers. Like with the costume options, Diversity of Options and Ability for Original Outcome is also present, not only through the sheer number of different components but also through the possibility of (re)combination. Westecott puts it as, "the player is continually invited to decorate the world" (2011, 92). As this is also disconnected from the game's objective goals, Optional Goal formation, and consequently Meaningful Choice, is again facilitated by allowing the player to save pod designs and take photographs of his creations in levels. Interestingly, photos can in turn be used as stickers again, becoming Chou's "evergreen" mechanic that allows "almost limitless" variation, which can continuously be renewed (2015a, 131).

It is important to note that the 'Stickers & Decoration' mechanic is sometimes used to reach an objective goal, such as place a sticker in a certain location, but that immediately takes away all the creative possibilities as it has to be a specific sticker on a specific location, without any room for improvisation or variation. These sections in the game are mostly used to familiarize the player with the functionality of the sticker-placing mechanic.

It is interesting to observe that *LBP 2*'s main story mode is extremely linear and does not really allow for much ludus-based creative play. As Van Den Bosch et

al. comment, “user creation is less mandatory,” than similar games (2011, 3). The movement mechanics are simple and straightforward: the player can run left or right, move into the background or foreground, and jump. As a platformer, *LBP 2*’s reward system is linked mostly to successful navigation throughout the levels; the player has to run and jump from platform to platform to reach the end of the level and progress through the story and receive rewards. The player receives more rewards if he does not die in a given level, he can find hidden rewards if he properly explores the level and even gain special cooperative rewards. Although these extra goals are optional, they are ludus-based because they are task-oriented. If playing a level with multiple players, the players are ranked according to who has collected the most bubbles in a given level, with one player being labeled as the winner. These rewards are all connected with successful navigation. As discussed in the previous section, although movement allows for a great variety of options, they are not meaningful in a ludus-type way if they do not significantly alter the player’s approach to reaching the objective goal. The game does not facilitate Supporting Goal formation, which could have allowed ludus-based creative play. The actions lack the dimensions of ‘Novelty/Innovation’ and ‘Original.’

The third category of actions is direct interaction. The main usage of this action is the ability to grab other players and objects. While dragging around objects gives some variable options and outcomes, Meaningful Choice is often very low, with usually only one obvious and logical position of where an object should be dragged to advance through the level. Chou labels this as a “Poison Picker/Choice Perception” technique, which gives only the illusion of choice, when there is actually only one viable answer (2015a, 150).

From a paidia perspective, dragging often does not allow for enough Diversity of Options and Ability for Original Outcome to allow 'Personal Customization' creative play. New interactions are possible when the player gains new gadgets like the grappling hook, throwing gloves or the cakeinator, a gun that shoots cakes that can be used to form new platforms. These mostly serve to improve the player's movement or help them to solve simple puzzles but they rarely allow for significant creative play, as there is often only one Meaningful Choice available.

The fourth category of actions, expression, gives *LBP 2* a unique potential as an outlet for players' creativity. The player can manipulate several components of his avatar. As soon as the left trigger is pressed, the left analogue stick controls the movement of sackboy's right arm (left from the perspective of the player). To control the other arm the player presses the right trigger and moves the right analogue stick. Sackboy can even make a slapping motion and smack one of his fellow players. By tilting the controller, the player can move around sackboy's head and by pressing the left stick the control switches to sackboy's hips. Moreover, by pressing the directional buttons, the player can make sackboy express four different emotions in three gradations: happy, sad, angry and scared. So, including the neutral expression, that makes thirteen different emotional states. By fully pressing the trigger, sackboy will make a hand sign with that particular hand, depending on the emotion: a peace sign for happy, a balled fist for angry, a downward thumb for sad and a shaking hand for scared.

Like the customization and sticker options, these actions are not related to any objective goals in the game and thus, if they were to exhibit creative play, they would have to reside in the paidia realm of play. Westecott aptly observes that it "allow[s] the player to play with Sackboy," "[reinforcing] a comparison with puppets" and

evoking the player's nostalgia (2011, 97). These options score well on the elements of Meaningful Play, because of immediate feedback, as well as Diversity of Options and Ability for Original Outcome (especially when used in combination with movement) but they only really count as Meaningful Choice when the Optional Goal is related to one particular expression of creativity, namely acting. By using the expression mechanics at the player's disposal in combination with actions like moving and grabbing, as well as uniquely designed costumes, the player can create a performance. Westecott similarly argues that *LBP 2* can be viewed as "digital puppet theatre" (2011, 96).

Not only do the diverse controls allow for the formation of such an Optional Goal, the ability to photograph moments in-game also supports this type of creative play, which Caillois would categorize as "mimicry," where a player "escape[s] himself and become[s] another" (2001, 19). Moreover, in the game's level edit tool, there are even options to record and stage performances, furthermore solidifying this as an accommodation by the game's structure to facilitate such an Optional Goal for players. This type of creative play can be called 'Entertaining Performance.' It is a form of paidia play, which can focus more on the creative perspective of 'Being,' in the form of a fleeting, impulsive (re)enactment of improvised or established characters, or it could even be emphasizing the 'Making' perspective, where player(s) seek to emulate or play a specific role in a scripted session that, in the case of *LBP 2*, can be recorded. The strength of this type of creative play is that it "allows the player character to act as an instrument through which the players get the opportunity to express themselves" (Westecott 2011, 97). 'Entertaining Performance' depends on subjective goal formation, in all probability entirely disconnected from the objective goals, and thus needs a free, non-punishing environment to flourish. Chou does not

seem to give a comparable example for this type of creative play, probably because of his natural focus on gamification, which stresses usefulness more. Similarly, apart from Westecott, this creative play type is not really mentioned in other work.

It is interesting to see that the ludus play in *LBP 2*'s story mode rewards players with more possibilities for paidia play in the form of unlocked costume parts, stickers and objects. Sotamaa also notices this and he comments on that relation between the story mode and the editor: "playing through the levels helps players understand the relations between different objects and the ways of combining them" (2010, 3). The ultimate facilitation of creative play is indeed found in *LBP 2*'s level-, or better said, game editor. Here, the player has free reign as he starts with a blank space with access to "the very same creation mechanic[s] used by the studio's professional designers" (Sotamaa 2010, 3). An expanded popit functions as the interface for all the tools, objects and decorations that the player has at his disposal and most of its usage will feel familiar as it is similar to the creative functions outside of the editor. Olli Sotamaa indicates that *LBP 2* is a rare example of a sublime "integration of the editor with the gameplay experience" (2010, 3).

I will refrain from listing all components and actions possible simply because the list would become too extensive as well as redundant. Apart from all the stickers and objects, the player also gains access to tools to draw with materials and many functional components like spawn points, levers, motors, etcetera. Meaningful Play is present through direct feedback but the player "is not subject to direct evaluation by the software itself," which stipulates that gameplay within the editor is not ludus-based because it is not rewarded by the game (Abend and Beil 2015, 2). Diversity of Options and Ability for Original Outcome are all present in abundance, and Meaningful Choice is again based on whatever Optional Goal the player can concoct,

or, in other words, the player's decisions are meaningful as long as they are interpreted as such; the editor itself does not punish or reward specific behavior.

Because levels can be saved, shared and rated, *LBP 2* enables Csikszentmihalyi's perspective on evaluating creativity based on the value attributed to it by the community. In a way, this enables a goal that is in between an objective goal and an Optional Goal, as it delegates the valorization of player actions not to the game system or to the player himself, but to other players. So, creation in *LBP 2* can indeed be more challenge-based if players would want that as asserted earlier by Chou (2015a). Van Den Bosch et al. also encountered this in their interviews where the perception amongst players was that "new levels [need] to be justified in the ecology of existing user-created material; it needs to add a worthwhile new game experience" (2011, 6).

This type of creative play can be called 'Player Creation.' It is mostly a paidia-based form of play, although Bronstring showed that there can be great variety within this creative play style that can be more goal oriented. It allows for creation from scratch, going beyond 'Personal Customization' in complexity, not only because of a greater amount of components and possible actions to (re)combine, but also because it offers tools to create new components and often a blank space, rather than customizing an object already present. Van Den Bosch et al. (again referring back to Raessens and Goldstein) recognize this as construction as opposed to simply reconfiguration: "the creation or implementation of completely new elements" (2011, 3). This type of creative play, which wholly centers on pure creation, is the most commonplace focal point of study in the academic literature, with Sotamaa, Van Den Bosch et al., Postigo, and Abend and Beil focusing almost exclusively on it, but,

interestingly, Chou himself focuses less on this variation, merely giving Lego and a digital drawing game as examples (2010; 2011; 2007; 2015).

To summarize, *LBP 2* facilitates multiple varieties of creative play through its design, which all seem to lean towards paidia play, with its main ludus-type story mode serving to expand the paidia play possibilities and as a showcase for the player's creations, whether that be his costumes, pod or levels. The 'Personal Customization' possibilities facilitate an easier approach to creative play than its more open and complex 'Player Creation' options, so creativity in gameplay is more accessible for all. The emphasis on sharing creations through online play, in combination with its possibilities for 'Entertaining Performance,' make *LBP 2* a unique gameplay space focused on playfully displaying and admiring creativity. Still, while Chou also gives examples of these types of creative play, they do not represent his main focus of more goal-related strategic creativity through meaningful choices. Conversely, the academic literature seems to focus predominantly on these varieties apart from 'Entertaining Performance,' which is only really mentioned and explored by Westecott.

CREATIVE PLAY IN *NBA 2K15*

The *NBA 2K* series has a long and successful history going back all the way to its first entry on the Sega Dreamcast in 1999. It is a basketball simulation game focused on presenting the sport as accurately as possible in the virtual world, with a high emphasis on emulating television broadcasting, complete with close-ups, replays, schedules and commentators responding to the action on the court. While this game might not seem like it has massive potential for creativity on the surface, it actually allows for similar types of creative play as *LittleBigPlanet 2* and even various other types. The analysis will be limited to the game's most popular mode, MyCareer, where the player controls only his avatar in the game.

The most common components in the game that the player controls or encounters are virtual basketball players, the ball and the basket. The actions available to the player can be separated in three categories, (1) customization, (2) gameplay actions and (3) player decisions. The objective goals presented and rewarded by the game are divers, and range from in-game actions like setting screens, making good passes, scoring, rebounding, defending well and winning the game to larger overarching goals like improving your player, gaining endorsements, becoming an all-star, unlocking badges or make it to the hall of fame. *NBA 2K15* (from now on called *2K*) has put the franchise's popular MyPlayer options front and center, shifting the focus on the individual player. As soon as the player starts the game, he is introduced to the main component of the game, namely himself. This is at least how *2K* frames it, as the player is directly offered a player creation tool to shape his personal avatar, who will star in the game's MyCareer mode, where the player will

attempt to make his glorious ascent from unknown, undrafted player to NBA superstar.

The player immediately starts with ‘Personal Customization’ as he starts the game, where he can manipulate several subcomponents of his player from his name, age, height and weight, to intricate details like the shape and position of his head, forehead, brow, ear top, eyes, nose bridge, cheeks, ear bottom, nose wing, etcetera. Although in-depth, the options adhere to what Compton and Mateas refer to as “modifying the meaningful,” where, although allowing for complexity and variety, the options never become too complex and always give users a “meaningful space to explore” (2015, 233). The options are all valuable for the player to construct a player to his liking or attempt to mimic his own physical appearance. The variations remain within limits of regular human anatomy. The player can also be personalized by changing his attire, such as shoes, socks, sleeves, headbands and wrist straps.

Like in *LBP 2*, the player is not rewarded for any of these actions so he is free to form his own Optional Goals in creating his player. However, there are a couple of interesting differences with the ‘Personal Customization’ in *LBP 2*. First of all, after creating a player and starting MyCareer mode, it is no longer possible to alter a couple of elements of the character. This is because, unlike in *LBP 2*, some components also influence the gameplay; not all components are valued only in an aesthetic sense. The player’s height, weight and position influence how costly certain attribute upgrades will be in the future as well as limit the maximum rating for that attribute.

This variant of ‘Personal Customization’ is even more apparent in the ‘Attribute Upgrade’ section of the game. Here, the player can create the play style of his virtual avatar by buying upgrades in six different categories: Jump Shooter, Inside

Scorer, Athlete, Playmaker, Rebounder and Defender. Each category is linked to several individual statistics. This would probably just be a linear upgrade system if it were not for a clever design decision, namely that there is a maximum amount of upgrades available, so the player cannot excel in every category. This allows for some creativity to flourish; however, technically, the player is not being creative in gameplay but is rather modifying consequent gameplay experiences. Chou offers *Plants vs Zombies* as a similar example for this type of creative play, where the player has the ability to explore and choose his own "variety of style and creativity-based strategies" (2015a, 155).

So, there is Meaningful Play through immediate feedback, even though the real consequences of the player's decisions will become more apparent later during a match, and his decisions will permanently influence later gameplay options. There is Diversity of Options with six different categories that can be upgraded up to twenty times. Moreover, there is Ability for Original Outcome because of the upgrade limitation that restrains the user from simply maxing out all attributes and can "encourage exploration" of the available options (Compton and Mateas 2015, 232). Most of all, there is Meaningful Choice in a unique way, as the player's decision can be seen as Supporting Goal formation, as it will help him indirectly in reaching the objective goals of winning basketball games and excelling as a player on the court, but also directly because upgrading is itself an objective goal as it unlocks badges and new animations that the player can use to modify his avatar. Furthermore, it can also fulfill a player's other Supporting Goals, because upgrading empowers the player to play his own way to reach the game's objective goals.

The influence that these decisions have make it a different type of creative play, perhaps better named 'Gameplay Customization,' a more ludus influenced form

of customization, where the player's choices influence the way in which he approaches the game's objective goals. This is in stark contrast with *LBP 2*'s 'Personal Customization' options, which are purely for visual effect, not impacting the ludus gameplay. In *2K*, the player can imagine an ideal play-style and gradually shape his player to match his vision. This is a perfect example of how Chou mainly explains his creativity drive, in that there are multiple "meaningful choices" possible, "while still achieving the Win-State" (2015a, 136). *2K* is full of this type of creative play, also enabling the player to customize the animation of almost every action that he can make in-game, from individual dribble moves to a wide variety of shots. These decisions impact the timing that the player has to learn to be successful in-game and, naturally, they also have an aesthetic value. This well-designed cooperation of 'Personal Customization' and 'Gameplay Customization' gives the player creative control on both an aesthetic as well as a gameplay level.

Not only does *2K* spur creativity in its many customization options, it also enables it in its main gameplay. And it is here where Chou's main idea of meaningful choice in pursuit of the win-state can really be found. The Diversity of Options available to the player are almost as diverse as they would be in real-life basketball, with thirteen different dribble moves, fourteen shots, twenty post moves and over forty different offense and defense related actions that the player can take, which can all be combined to create a practically endless possibility for Ability for Original Outcome ("NBA 2K15" 2014). It definitely allows for Meaningful Play, as the player gains clear and distinguishable feedback not only from his player, but also his teammates, his opponents, the game's score, the player's stats and his teammate grade, the replays, the half-time show, the crowd, and even the announcers.

Furthermore, the player's actions impact further gameplay actions later on during a game.

There is also the possibility for Meaningful Choice, which may be more or less diverse dependent upon the context of the player's actions. Sometimes, the player's best approach is clear through the nature of the game's rules and feedback system. For example, especially on defense, the player is mostly responding to his opponent's actions and his Meaningful Choice is not as diverse despite high Diversity of Options. If your man is running towards the basket, options like putting your hands up, setting a screen, jumping for a block or swiping for a steal are not meaningful as they do not help to accomplish the objective goal of not allowing your man to score, you simply move along with him to discourage a pass. Meaningful Choice is mostly limited to deciding between helping out a teammate and sticking with your man, or jumping for a block and taking a charge, or gambling for a steal and staying in front of your man. These simple choices are more influenced by quick logical decision making then creative problem solving and the better the player knows the nature of the game of basketball and his player's strengths, the easier and quicker these decisions become, leaving little room for Supporting Goal formation.

Of course this is from a ludus perspective, but *2K* does not really allow much free Optional Goal formation that does not serve the objective goal, as losing sight of and ignoring the objective goal is penalized, resulting in a bad teammate grade, a bad player performance and, probably, losing the game, which could eventually result in the player losing his position on the team. Olli Leino would label this type of gameplay experience as "undeniable," which means that "the player cannot deny [it] without decreasing his possibilities to act in the game" (2007, 116). So, there is not

much room for paidia play to flourish on defense, as it is actively discouraged by the penalty structure.

On offense there is much more ability for Meaningful Choice and hence also for creative play. There are many objective goals, like winning the game, getting a good teammate grade, or reaching overarching individual and team milestones like scoring a certain number of points or winning a certain amount of games in a row. Similar to chess, the player is free to set his own Supporting Goals that, according to his perspective, will enable him the best to accomplish the objective goal. Since there are also numerous objective goals, the player can also choose which one has more priority, further diversifying his possible approaches. For example, getting a good teammate grade can be done by scoring a lot of points on good shots, but also by freeing up teammates and getting a lot of assists. Moreover, scoring a lot of points can also be done in numerous ways. Since the opponent also responds to the player's actions, it creates an even greater diversity of contexts that the player can encounter and has to respond to. So, not only can the player pick and prioritize objective goals, the consequent Supporting Goals that the player can form can also be approached from multiple perspectives, allowing the formation of even more Supporting Goals. It allows for "an abundance of strategies and styles of play," a hallmark of good creative play according to Chou (2015a, 135).

To illustrate the possibilities for creativity in a given gameplay situation, imagine a player with the ball behind the three point line, facing the basket. He could pursue both the objective goal of getting a good teammate grade and winning the game. The player forms the subjective Supporting Goal[4] of scoring the basketball to

[4] *While scoring might not seem like a subjective Supporting Goal, in the MyPlayer mode it is actually optional, as the player can choose to contribute in many different ways without scoring to help win the game, which is an objective goal.*

get closer to reaching those goals. The player can choose to shoot immediately, or try to shake off his defender. The player chooses the latter and has the option to either involve a teammate to set a screen on his defender to free him up or choose to use his dribbling skills. Again, the player chooses the latter and can now choose a combination of up to fourteen different moves to engage his defender and see how he reacts. The player fakes right, to which his defender does not respond, and he drives left. His defender cuts him off and the player can now choose to back up, shoot, or try to go back to his right hand. The player goes right and can choose between a behind the back dribble, a spin move or a crossover to do so, each affecting his final position.

The enormous density of Meaningful Choice, of Diversity of Options that have Ability for Original Outcome that can all influence objective and subjective goals, allows for a ludus-based creative play that could be called 'Creative Strategy.' In the case of *2K,* given the complexity of the control scheme, the dimension of 'Skill' will probably play a huge role in fellow players evaluating the creativity of one another. Most academic literature on creativity in games focuses much on editor tools with concrete player production, but strategy is not often explored from the perspective of creativity. Chou probably emphasizes this goal-oriented type of creative play because it is more easily transferrable to gamification projects.

The one thing that can quickly endanger the quality and diversity of 'Creative Strategy' is the development or presence of a "dominant strategy" (Smith 2006, 75). Smith comments that any strategy "must have both advantages and disadvantages," otherwise players will forgo the creative process and simply pick the one option that is always successful in achieving the goal (2006, 37). Chou also demonstrates this danger with the limited creative potential of Tic-Tac-Toe (2015a, 132). Again, like in

the earlier example of chess, exploring choices should be *necessary* to accomplish the objective goals of the game to allow this type of creative play.

Nonetheless, even in the presence of a dominant strategy, because of a low difficulty setting, a lesser skilled opponent or perhaps a bug or a loophole, the game could still enable paidia creative play, which would mostly be based on separate Optional Goal formation, such as executing a certain combination of moves for its aesthetic quality or trying to reenact a famous real-life basketball moment from a favorite player. This form of creative play would be similar to *LBP 2*'s 'Entertaining Performance.' This is possible in-game of course, but even more in the game's practice mode, where the player is alone in a gym. However, the presence of objective goals and tight rule structure of the game of basketball (with a lot of time- and movement-based rules that discourage other activities) along with an active opponent stimulates a slightly different form of 'Entertaining Performance,' one that is probably still focused on reaching objective goals while also separately wanting to achieve Optional Goals that do not necessarily help in attaining the objective goals.

For example, the player would form an Optional Goal of doing a specific move to emulate a real player, separate from his goal to win the game, so the player does not form the subjective goal *in order* to reach the objective goal; it is not a Supporting Goal. This would probably mostly be done to display a sense of superiority or mastery over the controls and the opponent and could therefore better be labeled 'Boasting Performance.' This would be a form of creative play also rooted in Caillois' category of mimicry play, but it would reside in-between ludus and paidia, an interesting mix between 'Entertaining Performance' and 'Creative Strategy,' where an Optional Goal and objective goal are being pursued at the same time independent of each other, demonstrating creative and original value in both functional problem

solving and aesthetic quality. This variety is mostly absent in *LBP 2,* apart from goal oriented 'Player Creation,' which could similarly want to attain non-functional visual goals separate from a possible goal of creating a properly functioning level. As Chou focuses mostly on strategy formation based on its effectiveness in reaching objective goals, this type of creative play is not explicitly mentioned in his work, and neither does it appear in the academic literature.

The final category of actions available to the player are simple choices that can change the gameplay situation, like demanding a trade to another team or choosing a response in the game's cut-scenes, but they are not creative because of a limited amount of options and outcomes.

Practically all of the varieties of creative play in *2K* are actively supported by the presence of an active online community where the player can show off his created player and creative play in-game, but also by the 2KTV episodes that show top plays and costumes of online players. Like *LBP 2*, this can give an extra challenge based incentive to be creative in order to distinguish one-self online, and it facilitates and could incentivizes subjective goal formations for both the paidia and ludus related forms of creative play.

Although, on the surface, a sports simulation game might not seem like the most ideal creative outlet, *NBA 2K15* actually allows for a various types of creative play to thrive, partly because of the nature of the sport it simulates, but also through clever limitations in upgrade systems and a lot of customization options, combined with a huge online community, giving the player the ability to express his creativity in both paidia and ludus type play. *2K* is a more clear example of how Chou describes his creativity drive, where he stresses meaningful choice in strategy formation and continuous possibilities for new approaches and original outcomes.

DISCUSSION

Although only focusing on creativity within gameplay, and only focusing on two games, this analysis has synthesized six different types of creative play. Each type enables the player to express his creativity in a different way, and some are more associated with paidia play, while others thrive in ludus play. The types are as follows:

- (1) Personal Customization: allows the player to modify the aesthetics of game components, allowing creativity through a huge number of combinations of multiple elements that can produce original outcome.
- (2) Gameplay Customization: allows the player to craft his in-game approach to attain the objective goals of a game, enabling creativity by facilitating a variety of play styles.
- (3) Entertaining Performance: allows players to express their creativity and themselves by giving extensive control over a character or component and giving clear feedback for those actions, enabling a player to assume different roles and 'act' in-game.
- (4) Boasting Performance: allows players to express their creativity, identity and status in their play-style by giving extensive control over a character or component and giving clear feedback for those actions, enabling a player to assume different roles and 'act' in-game, while still steering them to pursue the objective goal of a game.
- (5) Player Creation: allowing players to create from scratch by giving them access to a wide variety of components that can be positioned and combined, and, optionally, also tools to create new components.

- (6) Creative Strategy: give players a large amount of Meaningful Choice in pursuing the objective goal of the game, allowing a player to express his creativity in a unique playing style through strategic choices that impact consequent gameplay options and choices later in the game.

The most paidia-based variant is probably Entertaining Performance, as it needs a certain amount of freedom in a videogame to flourish and it mostly disregards a game's objective goals. Apart from Westecott's "puppet theatre" comparison with *LBP 2,* this possibility for creative play has not received much attention as a research subject.

Personal expression of players is often analyzed in Personal Customization creative play, which also disregards objective goals and adds purely aesthetic and emotional value for the player. Ducheneaut et al. recognized that, although much had been written on avatar customization, little research has been conducted on "how and why users customize their avatar" (2009). Indeed, while Westecott and Sotamaa also mention the customization options, they do so only fleetingly. Likewise, Chou also only mentions this variant in passing in his examples. Like Bronstring has done for player creators, an in-depth analysis could reveal multiple styles of play within this creative play category, as Ducheneaut et al. also began to find (2009; 2009).

Personal Customization is the mirror image of its ludus-based variant Gameplay Customization, which is strictly focused on a player's approach to objective goals. One can imagine an overlap between the two variants, especially in role-playing games where armor and swords, for example, have both an aesthetic and a gameplay attraction. Chou mentions this creative play style as a gamification technique, fitting neatly in his focus on meaningful choice to enable creativity

(2015a). Interestingly, in game studies, this is rarely explored on par with the creative potential of level editors, while its creative possibilities can also be divers in its own way.

This is also true for Player Creation, a form of creative play that could still be very diverse in nature as Bronstring demonstrated (2009). One could imagine that each creative play type might have such a diverse subdivision underneath it. Player Creation as creative play style, while not receiving that much attention from Chou, has been analyzed heavily in game studies from the emphasis on enabling player participation (Sotamaa 2010), to exploring creation in multiplayer setting (Abend and Beil 2015), to seeking understanding about underlying motivations to create (Van Den Bosch 2011). The play style is described by Abend and Beil as, "game design and content creation," and Sotamaa similarly delineates it as "[enabling] players to participate in the design of the game" (2015, 1; 2010, 2).

Boasting Performance seems like an interesting ludus and paidia mix that values both aesthetic and strategic creativity and might not be as easily distinguished from Entertaining Performance or Creative Strategy in some instances or games. Further study of this type of creative play in other videogames and genres might reveal it to be a subset of Entertaining Performance. Both variants have received little recognition from Chou or the academic literature.

Creative Strategy is on the far end of the ludus spectrum and is fueled by utilizing the options and limitations of a game to constantly come up with creative solutions to in-game problems and challenges. It is this type of creative play that mostly symbolizes Chou's description of the core drive of Empowerment of Creativity and Feedback in his examples of chess, *Starcraft, FoldIt,* and *Magic: the Gathering*. Jonas Heide Smith explores this subject with his concept of strategicness

in his dissertation that focuses on the goal driven behavior of players, but he never frames it as creative play (2006). Although the presence of a dominant strategy can kill this type of creative play, the search for a dominant strategy requires creative exploration, what Chou mentions as "repeatedly [figuring] new things out and [trying] different combinations" (Chou 2015a, 26)

An important structural element that was part of both analyzed games to facilitate incentive for creative play was the presence of an online community with the option to display and evaluate creations, harkening back to Mihály Csikszentmihalyi's point that the evaluation of creativity happens in a sociocultural context (2013, 23). In such an environment, the creative works can be subjected to the evaluative dimensions of creativity, and, interestingly, in *LittleBigPlanet 2,* levels are indeed valued and rated along those lines, with some levels more valued for their intricate complexity (Intelligence and Skill) or their original theme and creepy atmosphere (Original and Emotion) while others are praised for their ability to push the creator tool to its limits, designing something truly unique (Innovation and Original). In contrast, the online mode in *NBA 2K15,* while also allowing players to display their uniquely created character, is mostly focused on enabling players to test their skills against each other, fueling Creative Strategy play, although it is also infamous for players discovering and exploiting dominant strategies, which demonstrates that Creative Strategy is difficult to maintain in an avid online community. Exploring the real value of these online community components in regards to stimulating creative play would be an interesting avenue for further research.

CONCLUSION

In conclusion, as Yu-Kai Chou argues, videogames can allow for a diverse variety of creative play. Although by no means exhaustive, this thesis has distilled six forms of creative play by analyzing two vastly different games. Interestingly, some types of play have received more attention in academic literature, and others are the linchpin of Chou's argument for the Empowerment of Creativity and Feedback as a main motivational drive.

Still, despite different areas of focus and varieties of creative play, four common elements can be found in the work of Chou and others: (1) Meaningful Play, giving the player clear feedback that could also impact further gameplay decisions, (2) Diversity of Options, ideally through combinations, (3) Meaningful Choice, ensuring that options could all help in achieving either a subjective or objective goal, and an (4) Ability for Original Outcome.

The types of creative gameplay distilled from the literature and the analysis, (1) Personal Customization, (2) Gameplay Customization, (3) Entertaining Performance, (4) Boasting Performance, (5) Player Creation and (6) Creative Strategy, demonstrate that creativity within gameplay can take various forms, sometimes leaning more towards free paidia play, other times dominated by stricter ludus forms of play.

Some types of play focus more on the mindset of the player and the process of creation from Young's perspective of 'Being,' where Chou's focus also mostly resides, while others emphasize a tangible creation, which can be viewed from the perspective of 'Making,' which is a more prominent focus of game studies academics. Admittedly, Chou's focus on meaningful choices appears to be a creative expression

closer to the unique nature of videogames as it is embedded in actual goal-driven gameplay decisions, as opposed to interaction in game editors, which could be argued to not really be gameplay at all (although it may be playful), but rather interaction with a tool which happens to be digital.

To briefly reflect on the method, it functioned well in its ability to reveal structure for possibilities of creative gameplay and by simply analyzing the available player actions and their consequences, much variety can be revealed. However, to truly cement and verify these types of creative gameplay, actual data from player interviews or playtests would be necessary in large numbers. The framework should also be applied to different varieties and genres of games to tests its usability, and it would also benefit from actual data-driven experiments involving players, which would put its validity to the test.

Interesting directions for further research could be exploring whether some genres are inherently more open to creative play and if some genres enable even more different types of creative play. Moreover, as Emma Westecott has done for *LittleBigPlanet,* the relation between a game's visual style, the social (creative) context and its mechanics in regards to stimulating creativity in gameplay could also be researched by using a different methodology. Furthermore, further study on the types could reveal interesting variations within a type as well as analyze hybrid creative play forms, where two (or perhaps more) forms overlap. An in-depth analysis of the role of social communities in facilitating creative mindsets would also be interesting. If extending the relation between videogames and creativity beyond the gamespace, using a controller to play games could be seen as a creative act in itself, since every session produces a 'new' variant of the game, similar to the playing of an

instrument, with the analogy between a game's rules and a sheet of music being the evaluation standard.

All in all, creativity as a whole, and particularly in games, remains an interesting subject. To return to Yu-Kai Chou's assertion that the Empowerment of Creativity and Feedback is an ideal motivational drive for videogames, and consequently, any other type of activity, while it is not possible to give a definitive answer, the public seems so have responded well to the creative options in *NBA 2K15* and *LittleBigPlanet 2,* which have sold over 5,96 million and 3,35 million units respectively ("Game Database" 2015). What has become clear is that, while creativity might indeed be a powerful motivator, the reasons for how and why people can be motivated by creativity in gameplay will be diverse, not only because people are different, but because creative play comes in many sizes, shapes and forms that all deserve proper academic exploration.

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