Devices of Expression in Video Games

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Abstract

This thesis explores the concept of expression and the devices by which creators express ideas. This paper attempts to establish the existence of devices of expression across a variety of media, particularly video games. It posits that video games have devices that are unique to their medium then proceeds to discuss two examples: Emergent gameplay and dynamical meaning. Emergent gameplay is expression that is generated through player interaction with complex systems within games. Four types of emergent gameplay: Micronarratives, Cheating, Strategies, and Player-authored content are discussed. Dynamical meaning is expression created from the interpretation of individual rules within games. Ways in which designers can and have utilize(d) and scholars can analyze these devices of expression in video games are given.

To my Mother and the memory of my Father,

both of whom push me to succeed in everything I do,

every day.

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Introduction

Introduction to Devices of Expression

       For as long as human beings have existed they have attempted to communicate ideas to one another. As critical thinking has evolved over time, a number of geniuses have reached for a means of expressing complex ideas and emotions that are hard to articulate. These geniuses have become the famous artists, writers, film makers, and scientists from history. Each and every one manipulated a medium of expression to convey a variety of ideas to an audience.

       Although media of expression are many and unique, within each medium, iteration over time has developed a number of tools and techniques through which a person with creative intent (be he or she an artist, writer, director, designer, etc.) can express ideas. These tools and techniques are devices of expression. Devices of expression are the basic fundamentals of expression within a medium that designers utilize (and expand upon to establish their own stylistic flair) in order to create meaningful content that can be understood by their intended audience.

       Video games are no different than classic media of expression such as film, literature, painting, music, etc. Video games have existed long enough to begin to develop devices of expression. A vast majority of the current devices of expression in video games, however, are simply appropriated, or copied and transformed, from existing media. This is common in newly created media. For instance, early film borrowed heavily from the devices of expression found in plays. Video games have borrowed

greatly from film in particular, and this is a logical leap because both are inherently visual media.

Besides appropriated devices of expression, however, video games are beginning to establish their own devices of expression that are unique to the medium. This paper's area of research has been inspired by the fact that there has yet to be a study of video games that searches for these devices of expression. Two devices of expression have, however, come to the surface in popular media and game design or development literature. These two will be the main focus of this thesis paper and are termed *emergent gameplay* and *dynamical meaning*. As a brief definition which will be expanded upon later, emergent gameplay is when player interaction with a gameplay system results in a reaction(s) that the player finds meaningful. Dynamical meaning is the expression of ideas through the rules of play in a game. These two devices are unique in that they only exist within games.

The purpose of this thesis paper is to explore the idea of devices of expression within video games with a specific focus on emergent gameplay and dynamical meaning. This paper hopes to establish a language of expression for video games, similar to the languages of expression in literature, film, and all art forms. In addition, this thesis will expose game designers to two devices of expression that are unique to video games (emergent gameplay and dynamical meaning) so that they might be able to utilize and expand upon these two distinct tools or devices of expression. This exposure will help game designers understand the ideas that are being expressed through these devices of expression in the games that they are currently creating. By exposing these devices to

game designers this thesis will expose these devices to scholars as well, and this thesis will identify how scholars could use these devices to critique and analyze games for their expressivity. Overall, this thesis will push video games as a medium to a more expressive (and hopefully more meaningful) future.

The Audience

This thesis is aimed at a variety of video game related fields. Each of these fields will find valuable takeaways from this paper. Game designers, developers, scholars, students, players, and producers will each find specific points of interest as they read through this thesis paper. The following paragraphs will highlight the key points that each of these professions should look for while they read.

Video game designers and developers should approach this thesis as a discussion of how to add meaning to the video games that they create. This paper will present a way of thinking about the mechanics of video games as a set of modular and expandable tools that can be used to convey specific ideas (dubbed devices of expression). Designers and developers will be exposed to the concepts of emergent gameplay and dynamical meaning as two specific devices to be utilized and expanded upon. Also, examples will be provided throughout the thesis that show how other designers and developers have used emergent gameplay and dynamical meaning to convey meaning in their games.

Scholars and students of video game theory should approach this thesis paper as a discussion of how to interpret the expressive content, or meaning, that is placed in games by designers and developers. Scholars and students will be presented an approach to critiquing and analyzing video games for their expressive content by identifying the

devices of expression that are being used by designers and developers in their creative works. The various forms and peculiarities of emergent gameplay and dynamical meaning will be identified in this thesis so that scholars and students can learn how to analyze games for these specific devices. In addition, they will be shown interpretations of these devices from game designers and other scholars. Using these examples, they will be able to craft their own full critiques, arguments, and discussions of these devices.

Players of video games will find this paper interesting in that it will identify to them the ways in which game makers convey meaning to them as they play through a variety of games. Although players may find the focus on Emergent gameplay and dynamical meaning limiting in its reach with regard to the many and varied ways game makers convey ideas, the discussion of devices of expression should enlighten players to a methodology for examining their own unique play experiences in order to discover new devices of expression.

Video game producers will have the unique perspective of being allowed to see ideas from the innovative creators of successful games such as *The Sims*, *Braid*, *World of Warcraft*, *Grand Theft Auto*, and *BioShock*. By being exposed to these ideas, game producers will be able to see firsthand the benefits of experimenting with means of expression in video games and hopefully work to implement these ideas into their plans with the assistance of the game designers and developers. It should be noted that many of the titles mentioned in this paper are from experimental and independent game makers or studios that make and distribute games simply to improve and progress the medium with no profitable return on the time invested. Some examples are Rod Humble's, "The

Marriage," and Jason Rohrer's, "Gravitation," which are freely available for download and play on the web. Although these games see little to no profit, the ideas that they have explored have influenced other more profitable endeavors, such as Jonathan Blow's *Braid*.

Expression

Expression Defined

The word expression is by its very nature a subjective term. This paper discusses devices of expression; therefore, expression must be identified, exposed, and constrained in order for the meaning of expression to manifest itself as a fundamental portion of this thesis. Expression has a variety of dictionary definitions. *Webster's Revised Unabridged Dictionary* defines expression as:

> Lively or vivid representation of meaning, sentiment, or feeling, etc.; significant and impressive indication, whether by language, appearance, or gesture; that manner or style which gives life and suggestive force to ideas and sentiments.

Dictionary.com Unabridged (v 1.1) defines expression as:

> 1) indication of feeling, spirit, character, etc., as on the face, in the voice, or in artistic execution: the lyric expression embodied in his poetry.
>
> 2) the act of expressing or representing, as by symbols.

Further, *The American Heritage Dictionary of the English Language, Fourth Edition* gives a similar definition of expression as:

> The act of expressing, conveying, or representing in words, art, music, or movement; a manifestation.

And finally, the legal definition of expression from *Merriam-Webster's Dictionary of Law*:

> 1) an act, process, or instance of representing or conveying in words or some other medium: SPEECH *expression* under the First Amendment>
>
> 2) a mode or means of expressing an idea, opinion, or thought
>
> *NOTE: An expression is protectible under copyright law, but an idea is not.*

Each of these definitions covers an essential part of what expression is in an artistic sense. As these definitions make clear, expression is a way of communicating complexities. Whether that complexity is communicated to someone or something or through a medium is irrelevant to the core of expression.

The Derived Meaning of Expression

By thoroughly reading the previous definitions and taking particular notice of the similarities and differences among the definitions, an all-encompassing definition begins to arise. Expression, in the simplest terms, is the conveyance of meaning, where meaning could be a wide range of things including ideas, symbols, emotions, etc. This simple definition of expression is concise, yet it is still open to an array of possibilities, and it is inclusive to the aforementioned definitions of expression. This definition is particularly nice because it is very hard to set boundaries on what should or should not be considered artistic expression. Many people err in this regard because they open themselves up to counterexamples that prove their definitions incorrect. This particular definition is left open to possibilities, especially the possibility of author intended conveyance of meaning, while staying simple, understandable, and meaningful.

Expressed meaning is dependent upon the perceptions of a receiver or interpreter. One person may view and interpret an expression in a completely different way than another person. Expression as the conveyance of meaning leaves expression open to a multitude of interpretations. Being open to a multitude of interpretations is important because it fosters a community of interpretation and debate over many and varied interpretations. This is the basis for scholarly literature critiques, scholarly film critiques, and scholarly art critiques: interpretation and debate over the expressed meaning of artifacts. Ultimately, meaning is determined by an interpreter of an expression. In games, this interpreter is the player of the game.

This definition does not assume that expression must be purposefully conveyed by a person with creative intent, but it does leave that possibility open. This is important because many people find meaning in a variety of works or natural forms in which authorial intent is debatable. To ignore this facet of expression would be a mistake. However, many works contain specifically placed expressions. In these cases a work can be likened to a puzzle for an interpreter to examine in order to discover the meaning that is being conveyed. It would be a shame to exclude this party of works as well. This is why expression defined as the conveyance of meaning is an ideal definition: it leaves open the possibility of an author, yet only assumes an interpreter. This thesis, however, is geared towards creators wishing to add or increase the conveyed meaning of their video games.

Devices of Expression

Tools of an Artist

So, how can people with creative intent add meaning to their works? Devices of expression are tools that can be utilized by a person with creative intent to convey ideas within a medium. The medium being the means through which expression occurs.

How well conveyed those ideas are depends upon the use of the devices and whether interpreters can discover the ideas that are expressed. Many of the more abstract devices, such as those used in modern art, can often confuse the untrained interpreter. This is possibly why some creative individuals are considered ahead of their time, or do not receive a large amount of recognition during their lifetimes. The devices they were using were not well defined and confused audiences and interpreters. To successfully convey an idea, the majority of interpreters should recognize the ideas being expressed. This can be extremely difficult to achieve in a medium as new as video games because the language of expression has yet to be defined.

Devices of expression are also known as techniques, methodologies, or languages in media other than video games. For instance, a collection of editing styles and techniques for film has been referred to as "the language of film" (Wohl, 2008). Throughout secondary school we learn to identify and utilize literary devices, these are the devices of expression used by writers. The perfection of any device or set of devices does not come easily. As with any aspect of life, practice makes perfect, and devices of expression in video games are no exception.

Iteration is a major factor in perfecting the use of devices of expression in video games. As with any design process "the more times you test and improve your design, the

better your game will be" (Schell, 2008, p. 80). In this regard, devices of expression are no different. Because game design literature is focused more on the creation of games as systems for play than games as a medium of expression, much of the literature about game design remains true in respect to devices of expression. Since devices of expression are tools that game designers can use to convey meaning, traditional game design literature is mainly orthogonal to this topic. Future analysis could be done to explore the expressive potential of design patterns and methodologies across the entirety of game design literature. A vast majority of authors place a particular emphasis on the importance of iterating a design in order to create the best design possible. Fullerton, Swain, & Hoffman discuss the benefits of iteration by saying that "real breakthroughs seldom come from the first spark of an idea – they tend to come from long-term development and experimentation" (2004, p.20). Similarly, iterating upon a device of expression is the only way to learn to fully utilize that device.

Iteration is also the key to expanding the device to meet specific stylistic goals. This is similar to painting and film, where many artists and directors have borrowed technical elements from previous artists and directors, but then shaped those elements to create a unique style. For instance, in film every modern day director utilizes cuts (when a shot transitions to another shot) to control the pacing of their films, but each director chooses how often cuts should occur, how long each take (one specific shot or narrative moment) should last, and from what angle the following shot will be taken from. These decisions help to create the director's style, although he or she is utilizing a basic filmic device of expression: the cut (or shot).

To recap, devices of expression are tools that can be used to create expression (or convey meaning) in a medium, and iteration is important in learning how to appropriately use devices of expression to convey meaning. So how does one determine what devices of expression exist within a medium? For the most part, classic media have conducted post-hoc analyses of creative artifacts to determine what devices of expression have been used in a work and what meaning has been generated from those devices. Because of the inherent creative nature of devices of expression and the fact that they evolve within a medium through the ingenuity and creativity of the authors within that medium, it is very difficult to determine the devices that exist or will exist until a work is judged and critiqued. This is the very nature of art and artistic movements.

With any evaluation of an artistic medium, there is the perceived problem of attempting to define terminology and concepts in a post-hoc fashion. That is, one attempts to view an extant artifact, and, through one's observations, define terminology and concepts. The more critically minded might posit the question: how does one verify the existence of an artistic concept? It is important to note that established artistic media of expression do not have major issues in this regard. Film and literature scholars routinely offer critiques and analyses of artifacts within their respective media. The exposure of devices of expression is inherently post-hoc because creative trends must be viewed in hindsight in order to be categorized by critics or field experts. In many cases these field experts are either academic scholars or the artifact creators themselves.

For instance, Edgar Allen Poe and Nathaniel Hawthorne were contemporaries who often wrote and critiqued their own and each other's works. In Poe's, "The Poetic

Principle," he discusses his own literary theories and in "The Philosophy of Composition" he describes the method by which he wrote "The Raven". Poe created his own devices of expression and defined his use of those and other devices of expression, guiding analyses and interpretations. Often times, the experts are the initiators of an entire movement in which case many of their tenets and manipulations of specific devices of expression are clearly defined.

In the late 50s and early 60s, the French New Wave (*Nouvelle Vague*) in film was born from a set of directors that had previously been film critics writing for the famed magazine *Cahiers du cinéma* (Thompson & Bordwell, 2004). In their criticism and in their method of direction they expressed their strong adherence to the "auteur policy" (Thompson & Bordwell, 2004, p.443) or the idea that "the director should express a personal vision of the world" (Thompson & Bordwell, 2004, p.443). Their ideas and critiques led to an entirely new approach to traditional filmic devices of expression in addition to entirely new devices that other directors would utilize from that point forward.

Despite the medium, devices of expression are created by people with creative intent and defined by those that work in or around the medium. Even in video games this point stands true. With the rise of independent game developers and developer blogs, fans and critics alike can get a picture of the themes and concepts game makers are attempting to convey with their games. With people like Jonathan Blow and Rod Humble creating games, discussing why each element of that game exists, and opening the arena of discussion about their games, the process of defining the devices of expression in video games is beginning to take place. Because video games are such a new medium of

expression it makes sense that these devices would only now begin to rise to the forefront in order to be discovered and refined.

Devices of Expression from Literature, Painting, and Film

In traditional media such as literature, painting, and film, there are a variety of devices of expression. For painting there are basics, such as color theory, the choice of physical media, dot, line, etc. From these basics, styles have been built (such as surrealism or modern art) that introduce more complex devices that are derivatives of the traditional devices mentioned previously.

In literature, many of the devices are clearly classified and common knowledge to anyone who made it to secondary school. These are the traditional literary devices such as allegory, simile, metaphor, anecdote, parallelism, narrative framing, etc. Similar to painting, styles which include more complex devices that have been derived from these original classic devices have formed and evolved over time. Mary Shelley's *Frankenstein*, for instance, was one of the first popular novels to utilize the device of expression known as narrative framing. This allowed for Shelley to frame the story of the Monster inside the story of Victor Frankenstein and his story inside that of Robert Walton's letters to his sister. The literary devices of literature are probably the most defined devices of expression of any medium because of the vast history of literary critiques.

In film, many devices of expression are contained within more complex devices. According to Bordwell and Thompson (2004), there are at least four sets of cinematic techniques: mise-en-scene, cinematography, editing, and the relation of sound to images.

Each of these is a *container* device of expression because each is composed of more simple devices of expression. Mise-en-scene is composed of setting, costume and make-up, lighting, and staging. Cinematography "involve[s] three factors: (1) the photographic aspects of the shot, (2) the framing of the shot, and (3) the duration of the shot" (Bordwell & Thompson, 2004, p.229). Editing offers four different ways to experiment with creating relationships between shots: graphic, rhythmic, spatial, and temporal. Film sound has four similar devices that can be utilized and manipulated. Those devices are: rhythm, fidelity, space, and time (Bordwell and Thompson, 2004).

All of these classic media of expression contain devices that authors have used to take advantage of each specific medium. In addition to the examples given above, many devices are appropriated from other media and applied to new media. For example, film borrows a variety of narrative devices from literature such as symbolism, which is a major part of iconography, parallelism, and the manipulation of time. Film, of course, learned to adapt the borrowed techniques to work within a visual medium, but many techniques were indeed borrowed from traditional literature.

The Nature of Video Games

Video games have, from the very beginning, appropriated devices of expression to create meaning within their games. The symbolic nature of representing spacecrafts or asteroids with pixels in early games such as *Galaga, Galaxian,* or *Asteroids* is an excellent example of a form of symbolism being appropriated very early on. This appropriation was brought about from the very nature of the video game. Video games follow a logical procession or evolution of visual media.

Video games have a multimedia heritage that follows from the visual imaginings of stories passed by word of mouth, to the visual imaginings of stories read from books, to images captured in paint, stone, on stage, or by a photograph, to moving images captured on film, to the addition of interactivity to those moving images. From this perspective, video games in their current form "are a comparatively *new* cultural form, intimately linked to the appearance of computers, postdating literature, cinema, and television" (Juul, 2005, p.3). This history of multimedia explains the appropriation of a variety of devices of expression within video games. Without structure, guidance, or the identification of the devices by which expression may occur, game designers jumped and still jump to other close relatives, such as film or literature, in order to figure out ways of expressing ideas to players. "Media draw upon established forms of expression… Only gradually do they evolve towards aesthetic independence and take on forms that are less derivative" (Smith, 2007, p.1).

An obvious example of appropriation from film is the in-game cutscene. The cutscene is basically a filmic sequence placed within a game to progress the game's narrative. These sequences are generally non-interactive, and, therefore, not native to the interactive medium of video games. Some games, such as *World of Warcraft* or *Elder Scrolls IV: Oblivion*, appropriate entire works of literature directly into the game (usually as short stories or novellas). These help create the mise-en-scene of the game, but take advantage of the devices of expression within literature rather than devices inherent to video games. These examples fall on an extreme end of a continuum of appropriation.

These examples lie on the side of the continuum in which little adaption to the destination medium occurs. For example, a cutscene is the direct placement of an animation within a game without any modification to its original medium (film). The advantage of this type of appropriation is that all of the devices of expression contained within the original or source medium are maintained. If a particular device is effective at conveying some idea or emotion it will be just as effective in a video game cinematic as it would be in a standalone film (player expectations aside). At the other end of the spectrum is the complete adaption of a device into a medium, which no video game has been able to accomplish as extensively as a medium such as film, which has fully adapted many of the narrative devices from literature. For example, film appropriated many of its narrative perspectives from literature by using differing camera styles to force the viewer to identify with a variety of characters. Film mimics the narrative perspectives of traditional literature with similar forms, ranging from third-person omniscient to first-person, existing in both media at a similar level of effectiveness.

Many games lie along the continuum, however. As games progress, the boundaries between devices that are appropriated and native to the medium will become more difficult to discern. Already a large number of games, such as *Shenmue, God of War,* and *Indigo Prophecy*, have attempted to move their appropriated cutscenes toward the interactive end of the continuum by having context sensitive segments during their cutscenes. Others have taken a different approach by placing appropriated elements into the environment itself. In *Dead Space*, cutscenes are presented in real-time and are projected from the character's environmental suit into the environment. Similarly in

BioShock, the narrative is told through a variety of audio logs that play in real time after the player finds and picks them up from the environment. These efforts to extract the benefits from appropriated devices of expression while manipulating them to be more native to video games as a medium have resulted in intensely immersive player experiences, favorable Metacritic.com reviews, and will no doubt influence the evolution of the medium.

A Ludological Perspective

In addition to the multimedia heritage of games, which some would consider a narratological examination of the medium (Juul, 2005, Murray, 2000), video games have a long history of progression from traditional games as well. Juul (2005) discusses this point by mentioning that "… if we think of games as *games*, they are not successors of cinema, print, literature, or new media, but continuations of a history of games that predate these by millennia" (Juul, 2005, p.4). The concept of studying video games from a games perspective has been termed ludology (Frasca, 1999). Ludology arose in response to the predominantly narratological examination of video games prior to the very late 1990's mainly to identify, or make obvious, the game part of video games.

Ludology brought to scholarly circles the concept that video games come from an extensive history of games with rules being a defining factor of both and an area worthy of study. The recognition of video games as the progeny of traditional games was a valid point that needed to be brought to the forefront at the time. Yet, many ludologists made the mistake of dismissing the multimedia nature of games and the narratological potential of the medium. In a way, they became as ignorant of the multimedia perspective of

games as the narratalogists were ignorant of the ludological perspective. A number of

scholars have attempted to find a variety of middle ground theories and a few ludologists

have acknowledged the importance of narrative in games (Juul, 2005, Jenkins, 2004).

While ludologists beneficially introduced the study of games and their rules, a

study has yet to be made of the expressive potential of games and their rules. This is the

perspective this thesis presents, the study of gameplay mechanics in video games (a

subset of games in general) for their expressive qualities. The view of games as a medium

of expression presents the concept that games have devices through which they can

express ideas that are unique to games. Both Juul and Humble discuss the Egyptian game

Senet as one of the oldest games known to man (2005, 2006). According to Humble

(2006), *Senet* was able to convey an immensely "compelling" message that contained

"spiritual importance" to the Egyptians and was "often portrayed as a bridge between the

living and the afterlife" (p.1).

One way that *Senet* was able to convey complex meaning was through its rules.

Rule-based expression is the basis of the two game-unique devices of expression

discussed in this paper: Emergent gameplay and dynamical meaning. In order to convey

meaning, games must have devices or techniques through which they can be expressive.

The extensive history of games is proof that many techniques have been established. For

instance, many games are based on similar play styles such as the many derivatives of

backgammon or Parcheesi, card games, and chess.

A variety of interpretations have been given of different traditional and video

games, these will be exemplified later in this paper. To have interpretations, a meaning

must be conveyed, generally, if not exclusively, through devices of expression. Because

of the lineage of video games as a progression from traditional games, video games share

many of the same devices of expression as traditional games. For this reason, a variety of

examples of emergent gameplay and dynamical meaning in traditional and video games

will be provided.

<div align="center">Emergent Gameplay</div>

Textbook Definitions

Emergent gameplay is built upon the concept of emergence from systems theory.

Emergence, in a form that is applicable to game theory, is when complexity arises in a

system from the combination of simple rules within that system (Juul, 2005, Fullerton,

Swain, & Hoffman, 2004, Salen & Zimmerman, 2004). Juul (2005) provides a variety of

examples of complexity arising from the simple outside of games: "life (life is

molecules), consciousness (the result of interactions between brain cells), anthills (there

is no central command in an anthill), bird flocks (there is no leader in a bird flock) (cf.

Johnson 2001)" (p. 78). Another common example is that of the *Game of Life* and its

derivative *glider* pattern from the field of cellular automata both of which are patterns

that arise in steps from the execution of simple rules (Juul, 2005, p. 79, Fullerton, Swain,

& Hoffman, 2004, p. 125, Salen & Zimmerman, 2004, p. 162). In all of these examples,

the complexities that arise do so out of a certain inevitability or spontaneity; they arise

from the interactions within the system. Emergence in games involves the complexities

that arise as a result of the variable of human interaction with the game system. A simple

example is the nature of multiplayer death matches because every player's actions and choices affect the choices and actions of others.

For this reason, there is some debate as to what emergent gameplay really is and of what it is composed. Fullerton, Swain, & Hoffman (2004) focus on the emergence that arises within ruled AI. They see emergent gameplay as the player's reaction to emergent systems by emphasizing the scenarios generated from the games that the player can witness: "games can employ emergent techniques to make more believable and unpredictable scenarios. Games as different as *The Sims*, *Grand Theft Auto 3*, *Halo*, *Black & White*, *Pikmin*, *Munch's Oddysee*, and *Metal Gear Solid 2* have all experimented with emergent properties in their designs" (p. 126). So in the perspective of Fullerton, Swain, & Hoffman, emergent gameplay is the player experience that arises from emergent systems.

A key component that their perspective is lacking, however, is the added complexity that player interaction provides to the emergent system within a game. Player interaction becomes another part of the simple rules that are begetting complexity. As Salen & Zimmerman (2004) state, "in games, emergence arises through the interaction of the formal game system and decisions made by the players" (p.164). By this definition emergent gameplay is not simply the player's experience of emergent systems in games, but it is the experience produced by the player's interaction with the emergent systems in a game.

Schell (2008) describes emergent gameplay as "interesting resultant actions" (p. 141) that emerge from the player's interaction with a game. This perspective ties together

the ideas expressed by Fullerton, Swain, & Hoffman and Salen & Zimmerman because it acknowledges that player interaction is a key component or initiator of emergent gameplay while also acknowledging the importance of the response that is generated from that interaction. The important thing to note is that emergent gameplay as defined at this point is bounded by player interaction and player interpretation of those actions, yet still open to a variety of possible types of emergent gameplay.

How does a creator harness and develop situations that facilitate emergent gameplay? This concept of authorship and designer intent is what Juul's definition of emergent gameplay brings to the discussion. Juul (2005) defines emergent gameplay as "situations where a game is played in a way that the game designer did not predict" (p. 76). Juul's definition recognizes the importance of player interaction and leaves open the idea of meaningfulness to the player as a part of emergent gameplay. It also opens the door to the concept of cheating as a form of emergent gameplay. But, Juul's definition creates more issues than it resolves. By his definition designer intent or the lack thereof is a requirement for the existence of emergent gameplay.

While the question of authorship and designer intent is important to determining whether a specific form of emergent gameplay should be considered cheating, for the majority of emergent gameplay forms it is an irrelevant distinction. Emergent gameplay must exist despite designer intent because it is a rather spontaneous formation of combined elements that depends to a large extent on player interpretation. Yet, to say that all gameplay that a designer predicts is un-emergent is a false statement as well because the designer creates and places the systems within the game world. Should the designer

want to map, using flow charts or state diagrams, every portion of the programmed AI in order to account for every possible allowed player interaction with that AI he could (although it might take the rest of his life in a system as complex as *Grand Theft Auto 4*).

So while a large portion of emergent gameplay may and will arise despite designer intent a large portion is also the direct result of designer intent. Because of this, Juul's definition is only useful for identifying the fact that some forms of emergent gameplay contradict designer intent, these forms are generally considered cheating. For designers this is indeed an important concept because to use emergent gameplay as an effective means of expression one must be careful to only place emergent properties that reiterate the idea being expressed. This concept of cheating as a break of expression will be discussed in full in a following section that explores the many types of emergent gameplay.

Emergent Gameplay Derived

Each of the previous definitions of emergent gameplay discussed a variety of different points relative to what emergent gameplay actually is. Boiling forward the key points from those definitions we get to what will be considered emergent gameplay throughout this thesis. Emergent gameplay is when player interactions with gameplay systems combine to create a complex reaction that is meaningful to the player. Meaningful to the player is a key component of Schell's (2008) argument that game design is about creating an experience for the player. Salen and Zimmerman (2004) also place a strong emphasis on meaningful play which they define as "the process by which a player takes action within the designed system of a game and the system responds to the

action" (p.34). This is what makes emergent gameplay a device of expression through which designers can create experiences that players interpret as meaningful. Indeed meaningfulness to the viewer, listener, player, or receiver is the key to expression.

Meaningful to the player is the hardest part of any expression because it relies not on the author as much as it relies on the interpreter (in this instance the player). There is no magic solution to making something meaningful to the player; this is why iteration, as previously mentioned, is a key factor. Meaningful to the player could mean a variety of things and is dependent upon each individual player. To some players meaningful may be that it allows them to accomplish designer intended goals within the game world. On the other hand it could simply be meaningful to a player because he or she enjoys the emotions that the combination of variables expresses to him or her. For instance, using the gravity gun in *Half-Life 2* to throw around and destroy crates could have a certain level of satisfaction even though one is not accomplishing any particular designer intended goals. In this case, the player is creating personal goals through which meaning is conveyed and enjoyment is increased.

The Authors of Emergent Gameplay

Because players can create and accomplish their own goals (or moments of enjoyment) through emergent gameplay, emergent gameplay is co-authored by the player and the game designer. The game designer places the possible player interactions within a game. Then the player interacts with those designed interactions. From player interaction with the game system emergent gameplay expressions are created. The expressions that the player deems interesting or meaningful he or she identifies with and interprets.

Through this interpretation the player experience is enhanced. As with any expression the player interpretation is many and varied, but as with any devices of expression within any medium, emergent gameplay can be constrained and constructed to at the very least narrow the possible range of interpretations.

By focusing on the ideas or themes he or she wishes to convey, a game designer can limit the range of player actions to actions that fit within that theme. Take for instance *BioShock*, in *BioShock* the player is allowed to progress through levels at his or her own pace and using the guns and/or plasmids (genetically enhanced powers) that he or she has chosen to find, upgrade, or purchase. Every battle with every enemy has the potential to be completely different for every player. Many of the plasmids can be combined with the environment to have a variety of effects on enemies. In addition, players can hack turrets and robots to fight for the player. All of the actions and power-ups allowed within *BioShock* are constrained to actions and powerups that could be found in a steam-punk influenced genetically enhanced underwater world.

By constraining the types of weapons and plasmids the game designer reinforces the theme of the game. Yet, the game designer also places a variety of these weapons and plasmids so that the player can choose the ones that the player wishes to use and approach every battle in a way that makes sense to that player. The gameplay is emergent because it is a reaction to the player's chosen interactions with the systems of the world, yet the player's actions only serve to reiterate the story and the entire theme of the game world. This is the great power of emergent gameplay: being able to make game worlds seem more real because the player is given the power of choice.

In many ways, emergent gameplay taken to infinity would be the "perfect" game idealized by Murray (2000) as *Star Trek*'s Holodeck and mentioned by Schell (2008) as the mighty aspirations of many game designers. Fully emergent gameplay would be a world in which every action, every choice made by the player would have a meaningful and realistic (to the specific scenario's theme) reaction. This is the aspiration of the Wii's motion controls and Project Natal's *Milo*. Emergent gameplay is quite possibly the technologically imperfect predecessor to virtual reality. But in the form it exists today, it is a powerful device for expressing the complexities of a reality to the player.

Take for instance the *Grand Theft Auto* series, which has used emergent gameplay in the form of nearly complete player freedom (within obvious constraints placed by the designer to make the world more real) to allow millions of players to live the life of a gangster. The possibilities of player interaction through emergent gameplay are endless.

The Types of Emergent Gameplay

Emergent gameplay has been used as a blanket term to house a variety of different types of gameplay. This paper will discuss emergent gameplay as micronarratives, cheating, strategies, and player-authored content. Each of these sections will discuss the different meanings that emergent gameplay expresses in each of its distinct forms.

Micronarratives. The first type of emergent gameplay is the micronarrative. Narrative is defined by Bordwell & Thompson (2004) as "a chain of events in a cause-effect relationship occurring in time and space" (p. 69). The prefix micro is added to indicate small parts of that chain of events ranging from particular events to a short series of events. A micronarrative is the story that is generated from the meaningful actions a

player takes within a game. As a player is playing a game, he or she will take many actions within the game; these actions are those that have been put in place by a game designer or developer. The actions that the player takes that he or she deems meaningful creates a series of causes and effects that can be termed a narrative. The individual actions or individual causes and effects in that narrative are a form of emergent gameplay known as the micronarrative.

Looking at the derived definition of emergent gameplay (stated above in the *Emergent Gameplay Derived* section), each micronarrative is a complex reaction that is meaningful to the player that when combined with other micronarratives can be shaped into a narrative, or a series of causes and effects. Through micronarratives game designers can allow players to co-author a variety of potentially complex narrative expressions. The combination of micronarratives is termed "emergent narratives" by Jenkins (2004) in his discussion of *The Sims* as "a kind of authoring environment in which players can define their own goals and write their own stories" (p. 10).

The Sims is an excellent example of the micronarrative form of emergent gameplay. By interacting with a family of "Sims" the player is creating a narrative unique to the player. Many games allow the player to create the narrative of their journey through a game world. *World of Warcraft*, *BioShock*, the *Grand Theft Auto* series, the *Elder Scrolls* series, and the *Fallout* series are all excellent examples that have proven the power of this type of emergent gameplay with the high attachment rates that their sales profess.

In the opening to "The Accidental Carjack", Miller recounts an experience she had from *Grand Theft Auto: San Andreas*:

> I accidentally stole a car today. It was a bizarre experience—I was just trying to ride this BMX bike I found on the street, which had a lot of play in the steering and kept landing me in bustling city traffic. I fell off the bike and was trying to get back on when I found myself pulling a driver out of his SUV and driving away, with the radio blaring "I Know You Got Soul" (the Bobby Byrd song, not Eric B. & Rakim). Maybe I have more road rage than I thought—it seemed like the easiest thing in the world to toss this guy onto the pavement and get behind the wheel. (p. 1)

This experience is the combination and retelling of her personal micronarratives, which were generated by her interactions within *Grand Theft Auto: San Andreas*, in prose form. Her experience with the emergent gameplay in the game created this entire complex expression co-authored by herself through her interpretations and the game designers who made those actions available within the game world. By placing the means for players to take interesting actions within game worlds, that reiterate the world, but allow for complex combinations or micronarratives that are personal to the player, game designers can greatly strengthen the reality of the game world's they create. In addition, players will feel more attached to the characters that the player has guided through all of the conflicts within the game because they have chosen how to deal with those concepts in a personal way.

This attachment to player-driven characters and the actions a player takes within a game world is perhaps a reason game-to-film adaptations generally fail. If a screenwriter was to base a script off of the emergent narrative of an individual player, it might lend itself to a more cohesive adaptation than an attempt to capture all of the unique experiences every player has had with a game in one script. In the future, entire transmedia artifacts might be created based on individual player experiences within games. This would fit with Jenkins' (2004) idea of "transmedia storytelling" (p. 6-7) where stories from games could populate tales from a universe rather than a specific artifact. Jenkins (2004) exemplifies this concept with the *Star Wars* universe: "[A] Star Wars game may not simply retell the story of Star Wars, but it doesn't have to in order to enrich or expand our experience of the Star Wars saga" (p.7).

Scholars can use this type of emergent gameplay to explore the assuredly complex emotions or ideas expressed through the allowance of particular micronarratives within a game. An example would be the study of the rippling effects of a particular or series of dark-side choice(s) in *Star Wars: Knights of the Old Republic*. Narrative scholars should be extremely excited by the potential micronarratives allow. Especially since games contain many of the possibilities of choice only dreamed of in Borges' "Garden of Forking Paths". Now scholars can follow all potential scenarios and theorize why the game designers would allow each of the possible choices. In addition, game scholars could analyze and critique their unique emergent narrative in a traditional fashion because it will indeed be a traditional linear narrative, but it will be a unique one nonetheless. Perhaps favorite series of micronarratives will arise through critiques and

those will be deemed the most interesting for their strife or character conflicts. A number

of possibilities exist, yet hardly any games have been critiqued in this manner.

Cheating. As mentioned in the presentation of Juul's definition of emergent

gameplay above, cheating is another form of emergent gameplay. Cheating is emergent

gameplay that breaks the boundaries of designer intent. Juul (2005) describes this

phenomenon as "*Emergence as novelty or surprise:* This is in its simplest form when

several rules or objects in a game are combined in a hitherto unseen way and surprise a

human player or designer" (p. 81). There are quite a few examples of cheating in games,

some popular ones are: the use of proximity mines as a means to climb walls in *Deus Ex*,

using rockets in combination with jumping (rocket-jumping) to reach areas not intended

to be reached in first person shooters (particularly *Quake III Arena*), reaching slightly out

of reach areas by combining jumping with crouching (crouch-jumping) in a variety of

first person shooters (particularly the *Halo* series), and quickly switching weapons to take

advantage of the sword lunge and longer distance reticules allowing the player to fly

across the world and instantly kill other players (sword-flying) in *Halo II*.

Cheating is emergent gameplay because the players are combining interactions

with the game to produce a result that the player deems meaningful, but this result is not

in cohesion with the designer's view of the game. Because of this last clause, many

cheats get quickly patched out of games (patches are software updates that fix errors in

the game's code). While cheating generally creates expressions from emergent gameplay

that are not consistent with the emotions or feelings (often the cheat breaks the reality or

theme of the game world by causing unrealistic (in relation to the game world) player

behavior or access to unfinished areas) that a designer wishes to convey (hence the reason game creators wish to remove the cheat), a designer should think twice before swiftly removing a cheat.

Occasionally the cheat may introduce a new, even fun, means of gameplay that was not previously conceived. For instance, sword-flying in *Halo II*, might have interrupted the flow of general deathmatches, but it introduced new game sets based around mid-air melee battles. When the cheat was patched, this new, emergent form of play was eradicated from the system. Game designers should examine cheats before eliminating them to see if the cheat has presented a new form of gameplay that could be placed into a mode or even sold as downloadable content.

Taking the time to see if communities form around a cheat or what players seem to be enjoying about a specific cheat can help a game designer understand his audience and even branch out to satisfy broader audiences. In these rare cases cheating may be creating expressions that do not actually break the game world for most players. It is possible that on the interpretive end the player is having the game world reinforced through the cheat; although, it may not be expressed in a way that the designer intended. This is why designers should be careful when eliminating cheats because they may actually be eliminating a key portion of a micronarrative form of emergent gameplay rather than a detrimental cheat. For the most part, however, cheating gives unfair advantages to players, and steps should be taken to remove cheats where this is the case. With massively multiplayer online games (MMOGs), designers must be particularly careful before making changes to classes or environments that appear to be too powerful

or unbalanced because community bias or strange population distributions may in fact be the root cause of the problem, rather than the supposedly cheating class or attribute.

Strategies. The concept of strategies as emergent gameplay is the recognition that player action is based upon the player's choice and pattern recognition. This concept is presented in traditional board games such as *Chess* and *Go*, but is applicable to video games as well. For instance, "… there is a myriad of end positions in chess that qualify as checkmate, and each of these positions can be reached in an immense number of different ways" (Juul, 2005, p. 75-76). A player's actions are informed by that player's knowledge of the rules and goals of the game. By taking action within the game the player builds strategies (although sometimes these strategies are unbeknownst to the player) by which the player approaches conflict within the game. Because these strategies are based on the rules of the game, the expressions created are caused by dynamical meaning, which will be discussed later in the paper. The fact that strategies inform player interaction is the acknowledgement that emergent gameplay can factor into what dynamical meaning is created. And, because strategies underlie a variety of actions taken in games, particularly in multiplayer games, the other forms of emergent gameplay, such as micronarratives are very much influenced by player strategies as well.

At an abstract level, strategies as emergent gameplay lead to the ideal of the Holodeck as discussed by Murray (2000). Strategies recognize all the possible interactions allowed a player, and the more interactions allowed the more complex an emergent expression can be (and the more Holodeck-like a game can be). Being allowed the choice of an action and even a pattern of choices (a strategy), or having a game that

recognizes and uniquely responds to a player's pattern of choices is the ideal narrative game as discussed by both Schell (2008) and Murray (2000). This form of emergent gameplay needs further study and development, which it will no doubt receive as games iteratively progress to a more expressive future.

   Player-authored content. Another form of emergent gameplay is the creation and player experience of player-authored content. The act of creating in-game content is debatably emergent gameplay. It depends on one's view of the tools of creation and how those tools are implemented within a game. A game such as *Spore* forces the player to use in-game creation tools as a means of progression. In *Spore*, in order to evolve his or her creature the player must find new parts for the player's creature and then enter an editor to add those parts. In addition, as *Spore* transitions to the civilization and galaxy phases the player is forced to create buildings and vehicles in order to continue playing the game. Having tools integrated into the gameplay experience presents an argument for the creation of in-game content as a form of emergent play because the player is indeed taking actions and making choices within the game that he or she deems meaningful. But, in many cases these tools are not as integrated as gameplay, and they require a transition from player to designer. For this reason, the creation of content is less emergent gameplay and more the player acting as a creator.

   The interesting aspect of player-authored content is that the content that other players create then becomes new content for other players to explore. In a way, "when game players become game producers, emergence is multiplied: in addition to the unexpected forms of play that occur inside a game, player-producers create entirely new

contexts for play, which in turn generate whole new play experiences" (Salen & Zimmerman, 2004, p. 540). With player-authored content the complexity of authorship is increased, one player's experience with another's content becomes a co-authored experience between the player, the content creator, and the game creator. This is because the game creator placed the realm of possible actions or the tools for creating allowed actions. Then, the content creator creates the unique scenario and the possibilities within that scenario. And then, the player creates an experience (emergent gameplay expression) when they play through the content. Allowing players the ability to create content for others has been proven to be an excellent selling point for many popular games. From the early days of *Quake* mods to the amount of content created for *The Sims* and *Spore* to the popularity of the level creator in *Little Big Planet*, the ability to create content extends the life and popularity of many games.

Designers should attempt to release authoring tools or develop systems by which players can add content and create new forms of play that the developer could not imagine. While this form of emergent gameplay is less about allowing a designer to express his or her individual ideas, it is valuable because it allows a variety of players to use a designer's systems to express their own ideas and emotions. Much debate has arisen in the past about authorship in relation to photography and film. This type of emergent gameplay could give rise to scholarly debate about authorship in games.

Emergent Gameplay as a Container Device

As previously mentioned, in a variety of media, film in particular, there are devices of expression that contain other more simple devices. Because of the multiple

types of emergent gameplay, it appears that emergent gameplay may be the first container device identified in video games. It is highly likely that with further study of emergent gameplay a variety of other simpler devices of expression will be discovered that comprise emergent gameplay. For this reason, emergent gameplay should be more fully studied and examined in the future in order to refine and discover all of the devices that comprise emergent gameplay. The study of authorship in relation to emergent gameplay and its sub-devices or types is also an area within emergent gameplay that deserves further study.

Beyond the study of emergent gameplay the medium of video games is a relatively unexplored space in terms of devices of expression. As the medium progresses designers, developers, and scholars will undoubtedly discover new devices of expression and learn new ways of manipulating existing devices of expression. The next device of expression discussed in this thesis comes from a relatively new idea termed dynamical meaning. Dynamical meaning has a lot of potential for designers and developers to express their ideas in new and interesting ways.

<div align="center">Dynamical Meaning</div>

The Definition of Dynamical Meaning

The term dynamical meaning was a word pairing coined by Jonathan Blow (Kumar, 2008) as a way of explaining ideas discussed by Rod Humble (2006) in his article "Game Rules as Art" and then implemented in Humble's independent game "The Marriage". "The Marriage" is a game that expresses the complexities and emotions of Humble's own marriage utilizing only basic western color theory and gameplay (or the

specific rules that the player can interact with within the game). In his article, Humble

(2006) expressed his ideas that would eventually be dubbed dynamical meaning as:

> … I believe that the creation and selection of game rules is an art form in and of
>
> itself. By this, I mean that the rules of a game can give an artistic statement
>
> independent of its other components. Just as a poem doesn't need pictures and a
>
> painting doesn't need music, a game needs nothing else apart from its rules to
>
> succeed as a work of art. (p. 1)

In other words, Humble believes that games can express ideas through their rules

or systems of rules, which we generally call gameplay, without other appropriated

devices of expression. For this reason, dynamical meaning is a device of expression that

is unique to video games. Blow (2008), in his presentation on dynamical meaning,

defines the term with the following:

> So for any game, any system comprised of behaviors, which I'll call a dynamical
>
> system, that system communicates something to the player, whether you, as the
>
> author of the game, intended to communicate that thing or not… This is just like
>
> any form of art, I'm just restating this for games, but I'm saying that the gameplay
>
> does this, it's not necessarily just the story or the visual assets, this is what I'm
>
> calling the dynamical meaning.

So, dynamical meaning is expression through the rules of play in a game. It is the

meaning that is conveyed by the systems with which the player interacts. This is different

from emergent gameplay in that the meaning is not generated as a complex outcome that

is a product of the player's interaction with a combination of game rules. With dynamical

meaning, expression is generated by the player's exploration and interpretation of each of the rules within a game. Dynamical meaning is more designer-controlled than emergent gameplay because the expressions come from rules that are specifically placed by a designer. Each of these rules can be interpreted in a number of ways, but the means of expression never changes, the rule stays the same. Emergent gameplay, however, is a product of an interaction between the player and the combination of those designed rules. So the expression in emergent gameplay is created from that interaction, the means of expression changes depending on which rules are combining and how the player interacts with those combinations. This is also why emergent gameplay is co-authored by the player and the designer, and dynamical meaning is authored solely by the designer.

Through dynamical meaning, each rule within a game expresses an idea or emotion. An interpretation of these designer created rules is dynamical meaning. Games that attempt to simulate the real world use dynamical meaning to reaffirm the reality of the game world through rules that are basically constraints. Gravity is an excellent example of a rule that constrains the movement of the player in order to reinforce the realism of a game world. Survival horror games, such as *Dead Space*, *Resident Evil 2*, and *Doom*, have limited the amount of ammo the player can hold while increasing the number of attacking enemies, using dynamical meaning to increase the tension and fright of players. Many game design scholars have understood the importance of a rule-based analysis of games (Salen & Zimmerman, 2004, Schell, 2008, Juul, 2005, Fullerton, Swain, & Hoffman, 2004), but none have discussed the meaning that these rules convey, although a few, interestingly enough, have offered interpretations (Juul, 2005, Murray,

2000) which acknowledges some level of communication between the player and the game's rules.

How Games Have Been Interpreted

As mentioned in a previous section, video games follow from a long history of traditional games. Dynamical meaning is a device of expression that has been carried over from traditional games. Murray (2000) discusses interpreting Monopoly as "an enactment of the allures and disappointments of a zero-sum economy in which one gets rich by impoverishing one's neighbors. Or it can be read as a patterned expression of our knowledge that success in life is always the result of both planning and chance" (p. 143). Murray's interpretations of Monopoly rely directly on the established rules of the game. In other words, she derives two interpretations based on the meaning conveyed through dynamical meaning. Because video games carry over dynamical meaning from traditional games, Murray (2000) is able to offer an interpretation of *Tetris* as "a perfect enactment of the overtasked lives of Americans in the 1990s" (p. 144).

Jonathan Blow, to point at the range of possible interpretations some games allow, describes Pac-Man as a game about "taking drugs and going on a rampage" (Kumar, 2008). He also discusses the ways that Space Invaders used dynamical meaning to communicate the rules of the game without requiring players to read a manual or the arcade cabinet (Parkin, 2008). A lot of early arcade games set up their rules in such a way that simple experimentation with those rules would allow one to quickly grasp the goals of the game. Through dynamical meaning these early games communicated their goals, but many ignored the depth of this form of communication leaving a variety of possible

interpretations. These types of interpretations are classic examples of scholarly attempts at discovering the truth. These interpretations are attempts at uncovering the truths behind what the game maker is attempting to say or what the game itself, as an artifact of expression, is attempting to communicate.

These interpretations are really analyses of the dynamical meaning in games. By acknowledging the existence of dynamical meaning, perhaps more structure can be given to interpretive analyses. By further defining the facets of dynamical meaning and other devices of expression, scholars can form a basis or structure for interpreting games. A simple way to start is simply to ask the question: What, step by step, is the gameplay conveying to me? By asking this question scholars can formulate more critical interpretations on the same level as a scholarly literary critique. In addition, appropriated devices of expression should be used as support for particular interpretations of the dynamical meaning in games. For instance, in "The Marriage" Humble admittedly uses basic western color theory to reiterate the ideas expressed through the dynamical meaning of the game (Humble, 2007).

As games progress as a medium of expression, game designers will be able to direct dynamical meaning to convey specific emotions. They will also be able to coordinate appropriated and unique devices of expression in such a way that the devices of expression reinforce each other. Many games already do this to a certain extent, but vast majorities fail to offer full reinforcement because they leave open a variety of conflicting interpretations when aiming for one distinct interpretation. There are two

major reasons why video games allow such a variety of interpretations from their dynamical meaning: abstractness and lack of reinforcement.

Many older video games, such as Tetris or Pac-man, are open to interpretation because they are very abstract games. The lack of detailed graphical cues leaves the game rules as the only real means of interpreting meaning; therefore, a variety of meanings can be constructed. In addition to being abstract, older video games are open to interpretation for the same reason that many new games are also open to a variety of interpretations: lack of reinforcement. Game designers have not really considered what they are expressing with dynamical meaning because it is a new concept. For this reason many rules in games express ideas that conflict with rather than reinforce the ideas, themes, or stories that the designer is wishing to express. By paying attention to dynamical meaning, designers have the chance to reinforce their ideas in new and compelling ways.

Dynamical Meaning as Reinforcement

Many game makers strive to create games with compelling stories. Yet, without knowledge of dynamical meaning, many game stories have contradicted the meanings that are being expressed through the gameplay. To make games more fun, game developers tend to contradict the issues they propose in their story worlds. "[Blow] called *BioShock's* little sisters an example of a 'supposed dilemma,' one undone by an interest in game balance" (Kumar, 2008). The "supposed dilemma" here is that in *BioShock* every player is given the option of harvesting or saving the little girls known as little sisters. Harvesting kills the little sister but gives an instant reward to players, while saving the little sisters frees them from their current state, but doesn't immediately reward the

player. Blow argues that by offering an instant reward for killing the little sisters the moral dilemma advertised within the game is contradicted by the dynamical meaning (Blow, 2008). Because the gameplay rewards players for being evil it reinforces that behavior and attaches less meaning to the choice.

Another game Blow calls out for its disjunction of story meaning and dynamical meaning is *Half-Life 2*. In the game, the player is supposed to form a connection with the supporting character Alyx, yet, because of the progression structure of the gameplay, Alyx is used gameplay-wise as an impediment to getting to the next area. The designers introduced these moments of impediment, where the player must walk with Alyx or wait for Alyx to open a door, etc. to allow the character a chance to discuss plot details with the silent protagonist. Instead of increasing attachment to the character, however, Blow argues that because the dynamical meaning expresses impediment to progress, these segments only serve to express frustration and even hatred of the character to the player for not allowing the player to progress at his or her own pace (Blow, 2008).

Blow cites *Grand Theft Auto 4(GTA: IV)* for having a similar issue to that of the *Half-Life 2* character Alyx because it makes "a story-critical character functionally useless (requiring large effort from the player with no reward)" (Kumar, 2008). Blow is discussing the main plot of *GTA: IV* in which a major side character is killed, but in order to get to know the side character one must ignore impending quests and spend time with the side character. Also, the two possible major side characters that are involved in the main plot are the only side characters that do not reward the player with some in-game bonus for spending a certain amount of time with the character. In this way, the

dynamical meaning of the game expresses that these characters are unimportant to the way the game is played, yet the story places a strong emphasis on these characters.

Although all of these games are very successful, the disjunction between story and dynamical meaning is impeding the progress of video games as a medium, and it is reducing the potential extra emotional impact that the stories in these games could have had. By considering dynamical meaning, game designers can attempt to make rules of gameplay that reinforce the stories, meanings, and ideas that they are attempting to convey. What better way to make an important story character valuable than to give them a meaning in the gameplay as well? An excellent example of when this was used well is in the game *Ico*, where the gameplay forces the character to take care of the princess (Yorda). Instead of Yorda becoming an impediment to progress, Yorda is the means of progression. She becomes another piece of each area's puzzle that Ico must take into account to progress. By making Yorda a part of the gameplay experience the relationship between the two main characters is reinforced and becomes emotionally compelling to the player. *Ico* is unique in this regard because it uses gameplay to increase the meaning of the princess character without turning the game into an infamous *escort* mission. This is a fine line to walk when creating compelling and meaningful characters using dynamical meaning. Iteration and playtesting are two good ways to avoid these kinds of pit falls.

By using dynamical meaning as a means of reinforcing themes and story elements, games have the ability to reach a much more expressive future and any game designer would be wise to think of the expressions being generated by the dynamical

meaning in their games. The tip that Blow gives from creating his game, *Braid*, is to think first of the meaning one wishes to convey with their game. Then, through iteration of the gameplay and consideration of what the gameplay is telling oneself, mold the gameplay to express the conceived ideas (Parkin, 2008). This method was successful for Blow in the creation of *Braid* and is an excellent way to keep dynamical meaning from conflicting with story and characters.

Conclusion

Both emergent gameplay and dynamical meaning present unique, medium-exclusive, ways to express ideas through video games. Careful consideration of the placement of rules and the expressions those rules create along with allowing a large number of combinations of these rules will assuredly maximize these two devices of expression. While it is difficult to separate these two devices, practice and iteration will allow game designers to fully utilize and modify these devices to express a variety of concepts and emotions. Used together effectively, these two devices have the potential to add a lot of thematic and emotional impact to a video game. One must be careful not to ignore the subtle expression of individual rules or the complex expression of combined rules and player interaction. It is easy for these two devices to come in conflict and express completely different ideas, but, by recognizing these devices and their potential, designers can at least introduce each with firm reasoning and consideration.

In the future, scholars should further expound upon the concept of devices of expression in video games. A good beginning would be a coordinated effort to discover, discuss, and experiment with devices of expression by scholars and designers. One

possible other device of expression is environment or spatial expression. This concept is discussed by Jenkins (2004) and is definitely a form unique to video games. In addition, further identification of appropriated devices of expression and their uses in video games would be an invaluable area of study. The study of appropriated devices could help developers learn when and how to use these devices based on how others have successfully conveyed meaning through them. These studies will assuredly lead to the recognition of games as a new medium of expression that is as emotionally powerful as any other artistic medium.

In summary, games, like any other medium of expression, contain devices of expression. Some of these devices are appropriated and some are unique. Appropriated devices of expression exist alongside unique devices of expression. In the future, more unique devices of expression will be discovered and manipulated to express ideas in new ways. Appropriated devices of expression will also be manipulated and intertwined with unique devices to create more complex devices of expression. Many appropriated devices will exist for many years to come as they become a part of interactive media, just as they have in film.

Two devices of expression that are unique to games are emergent gameplay and dynamical meaning. Both of these devices can be used and refined by designers to create more expressive video games. Both can also be used by scholars as a means of analyzing video games for meaning. Hopefully by identifying these devices of expression, a new perspective has been presented to video game designers/developers of ways to evoke interpretation from players. In addition, by identifying the concept of devices of

expression, perhaps scholars now have a foundation upon which they can build a

language of interpretation for video games. Above all, this discussion hopes that it has

helped progress the medium of video games toward a more expressive future.

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