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Putting the "Video" Back in Video Games: Opportunities and Challenges for Visual Studies Approaches to Video Game Analysis

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PUTTING THE "VIDEO" BACK IN VIDEO GAMES:

OPPORTUNITIES AND CHALLENGES FOR VISUAL STUDIES APPROACHES TO

VIDEO GAME ANALYSIS

by

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For my son, Francis David,

the best gaming buddy anyone could ask for.

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Abstract

I argue for the application of visual studies in video game analysis. This approach presents opportunities for the intersectional analysis of video game visuals as games are brought into dialogue with other visual media like film and painting. This approach also presents challenges due to ontological distinctions between different media as well as due to academic divisions regarding the study of different art and media objects. Despite the challenges presented, a visual studies approach is particularly useful as a critical window into contemporary visual culture at large.

I outline the fields of game studies and visual studies, marking their distinctions as well as the areas in which they overlap. I provide examples of visual studies approaches to video game analysis through an emphasis on the visual characteristics of video games. As visual studies is generally considered an interdisciplinary endeavor, I contextualize my analyses through comparisons with other visual media, in particular finding intersections with art history and film studies.

Specifically, I argue that perspective is an integral visual trait of many video games, relating the use of linear perspective and isometric perspective, used in some genres of games, with the development of perspective in painting. I examine various cinematic techniques used in video games and discuss their ideological potency. I also cover ways in which video games subvert conventional norms, such as through self-reflexivity, to open up novel avenues for visual expression.

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Introduction: Where Is *Rashomon* in Video Games?

Among the highlights of my time as a graduate student was teaching an introductory film

course in which I introduced students to Japanese director Akira Kurosawa's *Rashomon* (1950).

Kurosawa's masterpiece is pivotal in the history of cinema, and I encountered it for the first time

shortly after my formal exposure to cultural and media studies.[1] *Rashomon* is a wonderful multi-

narrative film involving contradictory perspectives told by its cast of characters, and it is fitting

to pay homage to this influential film at the tail end of my PhD, having contended throughout my

research with the problematic visual schematics of video games across mass culture.

Rashomon introduced Japanese cinema to the Western world after exhibiting at the

Venice Film Festival and receiving the Golden Lion award, and it soon after won the 1952

Academy Award for foreign language films.[2] The film is also important in fostering the

categorical distinction between commercial and art film by being a prominent title within the

larger global art cinema movement, a very influential movement at the time.[3] *Rashomon* is held

in high regard as a great film for many reasons, but prominent among these is its perspectival

narrative structure. The story involves a court trial recounting of a man's death, the nature of said

death, and the events leading up to it. The events are told through flashback recollections by each

of the primary characters: a woodcutter, a thief, the man (the spirit of whom speaks through a

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[1] Berger, *Making Sense of Media*. I am indebted to Arthur Asa Berger's phenomenal survey text *Making Sense of Media: Key Texts in Media and Cultural Studies* (2005), whose survey of the key figures, texts, and concepts surrounding media and cultural studies provided me with the tools necessary to more critically examine the cultural texts that have so interested me. I also owe my discovery of *Rashomon* to Berger's introduction to the film in this book, as the film became primary for my own thinking about and teaching of film. For Berger's analysis of *Rashomon* as a kind of montage of narratives, see Berger, "Sergei Eisenstein, *Film Form*," 96-98. Berger also mentions *Rashomon* in his chapter "Janet Murray, *Hamlet on the Holodeck*" on pages 68-69 of his book.

[2] Ebert, "Rashomon."

[3] Prince, "The *Rashomon* Effect." Here, film scholar Stephen Prince states, "[f]urthermore, the film's nonlinear narrative marked it as a decisively modernist work, and as a part of the burgeoning world art cinema that was transforming the medium in the 1950s."

spiritual intercessor), and the man's wife. By giving viewers "four versions of the same series of events … each retelling markedly different from the others," Kurosawa introduced a novel and arresting storytelling device not yet seen in film at the time and which would go on to be emblematic of an increasingly globalized world, a pluralistic melting pot of cultural perspectives.[4]

As film scholar Stephen Prince points out, *Rashomon* "has entered the common parlance to symbolize general notions about the relativity of truth and the unreliability, the inevitable subjectivity, of memory."[5] Indeed, *Rashomon* is based on what media and literature scholar Janet Murray terms "multiform stories," which provide several different versions of a story.[6] "The Garden of Forking Paths" by Argentine fiction writer Jorge Luis Borges is another key example of the multiform story.[7] The multiform story was important in the twentieth century and continues to be so in the twenty-first century as two world wars, increasing globalization, and a greater focus on marginalized voices have led to a multiplicity of historical narratives that are often in contention with one another. This perspectivism is a key aspect of postmodernism which continues to be impactful today. As media and cultural studies scholar John Hartley puts it, "[o]ur present epoch," through postmodernism, "is now … characterized by "petit-narratives or identities characterized by, for example, diversity, difference, … and sexuality" over "unitary concepts[.]"[8]

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[4] Prince, "The *Rashomon* Effect."

[5] Prince, "The *Rashomon* Effect." Prince cites as an example the phenomenon in the legal sphere known as the "*Rashomon* effect," "when firsthand witnesses confront [lawyers and judges] with contradictory testimony."

[6] Murray, "Harbingers of the Holodeck," 36-37, quoted in Berger, "Janet Murray: *Hamlet on the Holodeck*," 68.

[7] Murray, 31, quoted in Berger, 68.

[8] Hartley, "Postmodern, Postmodernism," 209.

As media scholar Arthur Asa Berger explains, *Rashomon* "reflects the influence of a postmodern sensibility on filmmakers. It also forces audiences to participate much more actively in making sense of the story and trying to figure out whose account of what happened is the correct one."[9] As is generally characteristic of postmodernism, universal concepts, values, and ideals are not to be taken for granted as universal in a work of art or popular text. Indeed, unknowability is underscored, and the audience is given the responsibility to make do for themselves, to take agency and find meaning for themselves amidst a world of uncertain meaning.

Explicating Murray's analysis of multiform stories like Borges' "The Garden of Forking Paths" (1948), Berger explains, "Borges' story serves as a kind of model for the kinds of narratives that would be created later, using computers, and culminating in video games."[10] According to Berger, Murray goes on to acclaim *Rashomon* as "one of the best examples of this multiform kind of story."[11] Murray states, "Multiform stories often reflect different points of view of the same event. The classic example of this genre is *Rashomon*[.]"[12] Being a film demanding more on the part of its audience to construe meaning than other films demanded at the time, the influence of *Rashomon* on video games makes sense given the wider conception of video games as a medium necessitating more active engagement on the part of the user than is typically required in other art forms. As such, *Rashomon* is an essential title in any introductory film course not only due to its historical importance in the shaping of film art and global cinema but also because of its relevance to modern society. With video games, modern audiences are not

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[9] Berger, 69.

[10] Berger, 68. See Murray, *Hamlet on the Holodeck*.

[11] Berger, 68. See Murray, *Hamlet on the Holodeck*.

[12] Murray, "Harbingers of the Holodeck," 36-37, quoted in Berger, 68.

only much more actively engaged with media through the universalization of the computer but are also embedded in an increasingly globalized world involving many cultural perspectives.

Yet while technology is leading to an ever more connected world, modern society's dependence on technology can also prove threatening through the many ways in which technology conventionalizes and governs how we experience daily life, often privileging one perspective or tradition at the cost of another. The question of whether or not and to what extent media affects society has been a central question for media scholars. As an example, Berger asks the following: "[h]ow do the media effect us, our families, our friends, and our societies … [and] do the media have profound and lingering effects upon us – effects that we may not necessarily recognize but which, nevertheless, may shape our ideas and behavior in important ways?"[13] Mass consumption film and video games do share a heavy hand in societal influence and, in my own view, the ideologies weaponized through technology are often predominantly at work through an increasingly digital visual culture, a visuality which serves at the front lines of mass culture and which shapes its audiences foremost through video games. Such ideologies include the entrenchment of power relations, the ennoblement of domination and control, and the reification of gender norms, among other agendas.

Rashomon's explicit questioning of the different narratives presented to the viewer serves as a lesson on how to interrogate the seductive media messages of our own time, and it lends itself just as well toward a reimagining of how video games can be conceived and analyzed toward a more direct ideological critique of today's visual culture. There are certainly distinct differences between film and video games in terms of their form and user engagement that complicate this bridge. Philosopher and media scholar Marshall McLuhan, for example,

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[13] Berger, "Introduction: The Media in Our Lives," 5.

distinguishes between hot media, "which engages one sense completely," and cool media, "which engages several senses less completely in that it demands a great deal of interaction on the part of the audience."[14] While these media differences entail important distinctions in their respective critical analyses, they nonetheless share essential overlaps relating to the history of representation at large. Further, while McLuhan's distinction is helpful for considering different levels of engagement between media, it is nonetheless an imperfect system, as some individual films or video games might be argued to be cooler or hotter than others. In certain instances, movies are becoming more like games and vice versa. *Rashomon* emphasizes the importance of the concept of perspective more generally and can be applied equally to different kinds of media, particularly regarding the notion of self-reflexivity, which places the viewer in a more active role of engagement via a self-aware awareness of the medium itself.

No matter how alike or distinct from one another different media are, media analysis must also acknowledge historical context. The perspectivism of *Rashomon* struck during a pivotal historical moment for Japan and the rest of the world. "The increasing moral confusion of [the characters'] accounts," as Murray points out, "in part reflects the postwar cultural crisis in Japan."[15] *Rashomon* premiered just a few years after World War II and, as such, can be contextualized amidst a crisis of cultural identity for Japan, a country emerging in the span of just a few years from rapid imperial expansion to being the victim of the first and second atomic bombs.

Additionally, Kurosawa's own filmmaking is influenced by the western genre. In particular, the fact that many of Kurosawa's films take place during feudal Japan reflects

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[14] "Hot versus cool media." See McLuhan, "Media Hot and Cold."

[15] Murray, "Harbingers of the Holodeck," 36-37, quoted in Berger, "Janet Murray: *Hamlet on the Holodeck*," 68.

inspiration drawn from early John Ford westerns, and this cultural exchange is likewise evident

in later American westerns, themselves based on Kurosawa's samurai films.[16] American director

George Lucas even credits Kurosawa as a key inspiration for *Star Wars: Episode IV - A New

Hope* (1977), which takes several of its character and situation tropes from Kurosawa's *The

Hidden Fortress* (1958).[17] Thus, *Rashomon* presents a compelling case study for perspectivism in

both its multiplicity of narratives as well as through the historical context and cultural crisis out

of which it was born. Even Kurosawa's directorial style, which does not seem to privilege any

one particular character in their recounting of events, remains consistent throughout. "Using

incessant and often subjective tracking shots, compositional depth and precision editing," film

scholar David Parkinson states, "Kurosawa consciously structured the action to challenge

accepted notions of perceived reality and filmic truth."[18] Indeed, much of Kurosawa's film style

throughout *Rashomon* tends to aggrandize each character equally in their recounting of events,

contradictorily giving each narrative deserving merit.

    Rashomon remains as vital today as it was when it was first released. For my film

students, the uncertainty of truth combined with the multiplicity of perspectives in *Rashomon* is

critical in our increasingly globalized and diverse world, in which many different peoples of

varying beliefs and viewpoints must navigate the flux of an ever-changing culture together. This

fact is perhaps even more evident as time marches further away from *Rashomon*'s debut, as the

digitalization and spread of cultural exchange increase at a faster rate. Perhaps video games

represent the zenith of this paradox wherein a single work is not only told from the vantage

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[16] Parkinson, "The Golden Age," 102.

[17] Taylor, "My Little Space Thing," 104-05. Also on page 104, Taylor makes the crucial point that, despite some similarities, Lucas's film is not "based on" *The Hidden Fortress*.

[18] Parkinson, "Facing Realities," 163.

points of different characters but also from the multiple points of view of its diverse audience

members, each of which no longer occupies the singular vantage point provided by the film

camera but instead experiences the whole work from their own chosen positions within the work

itself. *Rashomon* also casts suspicion on the seductive mediation of ideas in film and any

medium by extension. Once one is aware of the production of events mediated through images, it

is easy to see *Rashomon*'s themes at other levels of cultural exchange, such as in the news, the

visual and performative likes of which seem a construction all their own whilst also purporting to

speak as vessels of objectivity.[19]

That *Rashomon* leaves the viewer questioning the veracity of the film's narrative events

is a testament to the paradox of cinema's ability to both falsify and convince. It is perhaps the

first medium of such popular influence that can both enrapture the viewer in the seeming reality

of the constructed world before them as well as explicitly suggest that all may not be as it

appears. Truth can appear certain but still potentially be false, and, as such, we may forever be

caught in the uncertainty of many things despite their appearances. In other words, *Rashomon* is

a self-reflexive critique of both cultural and cinematic certainty: "Film cameras are admirably

literal, and faithfully record everything they are pointed at," American film critic Roger Ebert

points out in his four-star review of the film: "The message of 'Rashomon' is that we should

suspect even what we think we have seen."[20] The advent of video games as a mass medium

brings even more attention to the ideological influence of media as they are not only merely

visual artifacts but increasingly interactive ones as well. The ever-changing contemporary media

landscape shaped by games thus generates new questions around their study: What methods best

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[19] Al Jazeera English, "Roland Barthes."

[20] Ebert, "Rashomon." Ebert explains that Kurosawa's philosophy is also present in other of his films.

serve the ideological critique of video games as media distinct from painting and film? And further, how is visual culture at large, and the ideologies prevalent in visual culture, shaped by the distinctive visual regimes of video games, and to what degree?

In a world that is increasingly both digital and visual, *Rashomon*'s suspicion of the visual is perhaps being forgotten amidst an ever-greater global reliance on technology. Computers and the worlds experienced through them engender the values, beliefs, and conventions of technology users. In game studies, this privileging of a computer-oriented understanding of the world is predominantly understood through an ontological emphasis on algorithmic software procedures at the expense, I argue, of visually oriented criticism customarily reserved for other visual media, in particular painting and film. The field of visual studies is achieving this perspectival criticism through its own overthrow of traditional systems of inquiry developed in art history and film studies. How might this shakeup be brought over to the study of video games? Throughout this dissertation, I inquire about the opportunities and challenges that lie ahead in engaging with an approach to game studies that intersects with the field of visual studies.

Chapter 1: Putting the "Video" Back in Video Games: Visual Studies and Video Games

My subject here concerns game studies in the field's current state and the potential for its expansion through visual studies. Before defining the field of visual studies and applying video game critique through that lens, I aim to examine a predominantly nonvisual game critique and pursue some ways in which that critique might be extended with a greater concentration on the visual. This chapter moves on to an overview of the visual studies field and lays out the subareas I believe to be predominant in a visually oriented criticism of video games.

In *Unit Operations* (2006), video game designer and scholar Ian Bogost presents a comparative analysis of the personal computer (PC) game *The Sims* (2000) and its expansion *Hot Date* (2001) in combination with a number of literary works: French poet Charles Baudelaire's sonnet "A une passante" (1857), American poet Charles Bukowski's poem "A Woman on the Street" (1962), and French film director Jean-Pierre Jeunet's *Amélie* (2001).[21] What is remarkable about this analysis is the frictionless manner in which these disparate works are critically conjoined around a particular theme. In this case, Bogost discusses the notion of the "chance encounter" not only throughout each individual work but also in a magnified way by bringing them together in a unified fashion. The resultant critique brilliantly exemplifies "unit operations," Bogost's approach to a comparative video game criticism that provides an impetus for the interdisciplinary analysis of video games. I begin here with an exploration of this method before asking how Bogost's critique of *The Sims* might be further expanded upon through a visual studies lens.

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[21] Bogost, "Encounters across Platforms."

Bogost defines unit operations as "modes of meaning-making that privilege discrete, disconnected actions over deterministic, progressive systems."[22] Unit operations borrows from literary theory, mapping out and analyzing discrete networks between readings, and the approach is opposed to system operations, which rely on a singular authority for interpretation.[23] Both unit operations and system operations are terms shared by computer science.[24] A unit is characterized as a material object that bears meaning in relation to other objects.[25] Units can manifest as abstract or conceptual manifestations: Bogost gives the examples of "jealousy, racial tension, and political advocacy."[26] It is in this way that Bogost uses the concept of the "chance encounter" as a unit within the network, a network spanning *The Sims* and other titles.

These intersectional, nodal units are where the latter half of unit operations, "operations," comes into play in order to enact the unit into critical processing. Bogost defines the term "operation" as "the means by which something executes some purposeful action."[27] Bogost maintains that one must interpret operations in a loose, general way because of the shared artistic and technological natures of video games.[28] Referencing German philosopher Martin Heidegger, Bogost observes that unit operations tend toward creative output whereas the opposing system

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[22] Bogost, "Unit Operations," 3.

[23] Bogost, 3.

[24] Bogost, 3.

[25] Bogost, 5.

[26] Bogost, 3.

[27] Bogost, 7.

[28] Bogost, 8.

operations remain static.[29] In other words, the use of unit operations represents an inside-out

approach rather than outside-in: The unit, or concept, should come first in analysis, and then it is

extrapolated fluidly within a network of larger systems. This approach represents the inverse of

most traditional approaches to analysis, wherein a hermeneutic system is staked out prior to the

interpretation of an object within the context of that system. This latter approach is exemplified

by the conventional application of psychoanalysis in film studies. For example, the larger system

of psychoanalysis, which often abides by certain foundational theses, can provide a stable system

within which a particular object of analysis, such as one or more specific films, can be examined,

although one should also note that even well-trodden systems contain a variety of nuance and

varied application in practice.[30] A unit operations approach first takes into account an observable

unit concept with which a larger system may intersect even though its rules may no longer hold

consistently.

      The traditional academic divide between the arts and the sciences constitutes an analogy

for the dichotomy between the inside-out approach of unit operations and traditional outside-in

thinking conventional to systematic approaches such as psychoanalysis. The arts field

encourages original projects and analytical novelty, even if drawing from traditional methods

and approaches as its foundation; the sciences tend to depend strongly on tried-and-true systems

for interpreting data. To simplify further with a metaphor, it is the case of a poet versus a

computer. While rational analysis can be deployed on a poem, poetry tends to carry more

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[29] Bogost, 8. Bogost states on this page, "[i]n the language of Heidegger, unit operations are creative, whereas system operations are static." See Heidegger, "The Question Concerning Technology." Bogost specifically references pages 17 and 32 from Heidegger on pages 6-8 of "Unit Operations."

[30] Art history and women's studies scholar Anne D'Alleva explains, for example, Freud's systematic categories of the "'id,' 'ego,' and 'superego'" on page 90 of D'Alleva, "Psychology and perception in art." See Mulvey, "Visual Pleasure and Narrative Cinema" for film theorist Laura Mulvey's application of psychoanalytic theory to Hollywood cinema as an influential application within film studies, which is discussed as such on page 105 of D'Alleva, "Psychology and perception in art."

ambiguous meanings in its interpretation than a novel constructed with a conventional plot structure. This ambiguity in poetry largely results from an attempt, in many cases, to derive word choice and arrangement from feeling or intuition, as much as, if not more than from conventions of structure. The influence of emotion and intuition is not something easily replicated through computer software, though it is nonetheless present in the play experience. What makes video games particularly complex as objects of study is that they constitute a mix of both art and science. Video games can take the form of radically different experiences in this context. Players can experience a pure combat simulation like the PC first-person-shooter (FPS) game *ARMA: Armed Assault* (2007), known for its unmatched realism, or revel in the taut narrative drama of the multiplatform interactive mystery-adventure game *Heavy Rain* (2010).[31] Solving this dichotomy for Bogost means treating the unit as a fluid, open thing for analysis, echoing the French philosopher Alain Badiou's ontological consideration of any one value being really a multiplicity which bears meaning only as a set of a larger system, or of being a situation in continual process.[32]

This bearing positions unit operations as an approach ripe for multiple analytical considerations, wherein the analysis transforms depending on the manipulations of the analyst, whose own query with an analytical object is itself implicated in a different and relative position compared to the vantage point of another analyst, even if that other analyst might have had similar training or may share a similar disciplinary background. This understanding might explain why no two texts ever appear the same, no matter if the text is ostensibly on the same subject or written by similarly trained authors with comparable training and backgrounds.

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[31] Mitra, "7 Most Immersive Arma 3 Mods."

[32] Bogost, "Unit Operations," 11-12. Bogost references several works by Badiou throughout his extended explanation. See Hallward, *Badiou: A Subject to Truth*. And also Badiou, *Briefings on Existence*, among others.

Though one may readily conceive that the outside systems surrounding the author and the text are uniform, linguistic articulation flows in an immense variety of forms that are never replicated from one instance to the other. Even the same writer on the same subject may write differently on a different day or at the onset of new weather, among a myriad of other contingent factors. The process of signification flows in a much more arbitrary and variegated fashion than articulated systems can account for.

In this way, unit operations is an integral approach to the study of video games because it is transparent about the dual-sided nature of video games and opens up more interdisciplinary and—therefore, open-ended and fluid—engagements, an opening I argue is paramount in the study of video games due to the rather insular nature of game studies at present. I theorize that this insularity is at least partly the result of mass culture's overarching preoccupation with technology, which involves the digital representation of things in particular but also includes the hardware infrastructure at its roots, along with traditional academic departmentalization more accustomed to the epistemological compartmentalizations of older media.

Bogost identifies a disciplinary divide exacerbating the arbitrary duality between artistic and scientific approaches to video games—and perhaps computer art more generally—in the rift between technologists, on the one hand, who discount "critical theory, philosophy, and literature that trace, accompany, and inform the development of software technology," and humanists, on the other hand, who are unserious about technology.[33] In this way, a unit operations approach shares a desideration for interdisciplinarity that is also found in visual studies. This preference for operating in-between disciplines forms a kind of resistance to the static methods and approaches that might be more traditionally found in disciplines like art history or sociology.

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[33] Bogost, "Introduction," x.

Indeed, visual studies, which remains as disjointed from video games as computer science is from comparative literature, offers similar opportunities for not only an intellectually novel approach to video game studies but also a practical approach, drawing video games between university departments to engage research between faculty and students to engender revelations that might otherwise be missed without the synthesis of multiple lenses.

Bogost's unit operations analysis of *The Sims* offers such a case study. For Bogost, a "chance encounter" formulates a unit operation, an overarching concept, representing a "random, anonymous meeting one has in modern environments, usually but not always with a subject of desire."[34] Bogost traces the concept of the chance encounter across multiple works of varying historical moments and types of media to examine how the unit concept has changed through time, arguing ultimately that the chance encounter begins as a moment of crisis and eventually becomes a compact representational mode.[35] By examining the chance encounter across such variegated cultural contexts—historical time and medium type particularly—Bogost highlights the fluidity of cultural meaning; neither the unit itself nor its surroundings are constant. In other words, meaning is not fixed but polysemic, which means something "might mean any number of things."[36] Within such an analysis, one does not arrive at the ultimate meaning of the analytical object but a multiplicity of meanings outlining degrees of change across the fluid spectrum of historical time and cultural signification. In short, Bogost's approach represents a move away from the functionalist underpinnings still haunting game studies. Functionalism refers to a platform of approach to game studies which, as Bogost puts it, "privileges the ludic over the

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[34] Bogost, "Encounters across Platforms," 73.

[35] Bogost, 73.

[36] Hatt and Klonk, "Semiotics," 208.

literary" and "the material at the cost of the expressive."[37] Simply put, functionalism takes on a more scientific mode than an artistic or expressive one. Thus, functionalism seems to place video games along more scientific lines of inquiry because of their underlying technological material.

According to Bogost, this functionalism has its doctrinarian roots in media scholar Espen Aarseth's position on cybertextual functionalism as well as in Aarseth's aversion to literary intersections.[38] This anti-expressive stance took a firmer hold with certain tenets formed by the research organization known as the Digital Game Research Association (DiGRA) in 2004 through its forum known as "Hard Core," aimed at legitimizing a functionalist approach to game studies.[39] In general, a focus on procedurality in games has remained predominant ever since.[40] With unit operations, Bogost does not aim to go against analytical approaches that focus on the uniqueness of the video game medium in favor of the literary but rather aims to find a middle ground between the two.[41] I explain later in this chapter how visual studies may offer a similar opportunity for more open-ended criticism, albeit with a more visually oriented direction.

Bogost's treatment of *The Sims* in his comparative literary analysis of the chance encounter reveals the productivity of treating video game expression somewhere between the functionalist and the expressive. His analysis emphasizes important medium-specific qualities vital to playing *The Sims* but also shows how the unit concept of the chance encounter can be productively examined through the intersections of both a poem written over a century ago as well as through a modern computer simulation.

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[37] Bogost, "Comparative Videogame Criticism," 53.

[38] Bogost, 52. See Aarseth, *Cybertext: Perspectives on Ergodic Literature*.

[39] Bogost, 52-53. See *DiGra*, http://www.digra.org/. See also Mäyrä, "The Quiet Revolution."

[40] With exceptions. See, for example, Arsenault, Côté, and Larochelle, "The Game FAVR."

[41] Bogost, 53.

Bogost describes *The Sims* as "a daily life simulator, a game that allows the player to manage a household of simulated people, or 'Sims.'"[42] *The Sims: Hot Date* is an add-on expansion for the game which "adds a 'downtown' area that Sims can visit to meet or woo potential love interests."[43] *The Sims* is ripe for cultural commentary as a representation of consumerism; the game has been interpreted as both ideologically pro-consumerist in that respect in addition to being interpreted as critical of consumerism by way of acting as a self-aware parody.[44] However, Bogost focuses on the *Hot Date* expansion in particular because it moves the avatar subjects away from their homes, which form the primary simulation space in the original game, and instead into a downtown environment where the chance encounter is contextualized for this particular analysis.

In his analysis, Bogost establishes both the functionalist distinctions of the chance encounter as enacted in a simulation, the concept of which stands in sharp contrast with the way it is in play in both Baudelaire's "A une passante" and Bukowski's "A Woman on the Street," while at the same time adroitly circling back to its conceptual expression. Bogost states that while the two poems utilize their own distinctive formal traits for expression, *The Sims* likewise generates meaning through its own "numerous codified rule sets."[45] Events result from the interaction of the player taking intentional action within a constrained set of the game's system-instructed rules, which results in a series of discrete "units" of meaning rather than unbroken

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[42] Bogost, "Encounters across Platforms," 84. While Bogost references the earliest titles in the series, *The Sims* has been regularly updated with new iterations of games, with the most recent being *The Sims 4: High School Years* (2022), an expansion for *The Sims 4* (2014).

[43] Bogost, 84.

[44] Bogost, 85. Bogost discusses as an example Frasca, "The Sims: Grandmothers are cooler."

[45] Bogost, 86.

"streams of narrative meaning."[46] Indeed, the algorithmic base of video games, or their software

rules enacting the game per the player's inputs, is a major aspect of the medium that

differentiates it from narrative literature, film, and poetry, within the context of Bogost's

comparative analysis. Regarding this base, media scholar Alexander Galloway states, "data issue

instructions to the hardware of the machine, which in turn executes those instructions on the

physical level by moving bits of information from one place to another, performing logical

operations on other data, triggering physical devices, and so on."[47] The stepwise if/then logic of

video games provides more discrete meaning-making that more akin to examining various parts

of a painting individually in order to tell the whole story of the scene. This experience contrasts

with that of reading a novel or viewing a film, which seems to move along in a more seamless

fashion. As Galloway describes it: "The operator and the machine play the video game together,

step by step, move by move. Here the 'work' is not as solid or integral as in other media."[48]

However, the technical analysis of video game expression by means of its discrete software

operations is ultimately unsatisfactory. As with poetry, the technical explanation of a video

game's form does not do justice to the almost poetic, ineffable sense of the play experience itself.

Proper critique of video games, like any art object, ultimately depends to some degree on

subjectivity, either on the part of the player, the critic, or both.

Both Bogost and Galloway's observations demand renewed consideration amidst the

expressive fluidity of modern games in particular. The if/then software rule base is indeed

stepwise at the level of the medium's formal structure. This process of discrete operations is

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[46] Bogost, 84.

[47] Galloway, "Gamic Action, Four Moments," 2.

[48] Galloway, 2.

exaggerated in a simple simulation of tabletop chess and even in many turn-based games like the

PC strategy game *BattleTech* (2018) or the PlayStation 2 Japanese role-playing game (JRPG)

Final Fantasy X (2001). However, modern video games prove that video game expression is

becoming more and more fluid as technology advances. In video games, expression is nearly

always coterminous with gameplay. Even while a player is entering discrete inputs one after the

other, all perfectly segmented as far as the software humming beneath the machine, the player's

actual semiotic experience is much less discretely segmented. In a fast-paced shooting game, a

player may be entering discrete inputs with the controller, but they are at the same time

processing the movement of objects on the screen, calculating incoming attacks, planning their

next tactical approach, and enjoying the color palette of the game's aesthetic design. For

example, the multiplatform FPS game *Overwatch* (2016) has much more going on and

occupying the player's seamless attention at once than the multiplatform tactical game *XCOM:*

Enemy Unknown (2012), which is much more like chess in providing discontinuous playtime and

allowing the player the luxury of thinking over their moves before giving the turn over to the

machine. Turn-based games notwithstanding, the actual play of many games is much more fluid

than the video game computer base entails. In fact, at an ontological level, literature and film

might be considered rather linear and discrete in their own bases of production. Literature is

discretely divided into smaller and smaller units, including sentences, words, phonemes, and

letters. Film is arguably an arrangement of discrete shots that are edited together, although there

is a stronger case for fluid signification among various mise-en-scene elements within the course

of an individual unbroken shot, likening the visual experience in this way to that of painting.

Nonetheless, the algorithmic if/then logic of video games is unique in the interaction

necessitated by the player, which involves a greater degree of contingency within the rule-

defined system at large. This aspect is perhaps the most crucial. "With video games," Galloway

states, "the work itself is material action. … The operator and the machine play the video game

together, step by step, move by move."[49] This notion that video games are somehow less fluid, at

least in their material makeup, should be respected, even if the logic of the medium's computer

base is somehow lost in the actual experience of gameplay. This contrast between the productive

makeup of games and their more fluid expression perhaps forms the crux for disagreement

between more scientific and artistic approaches to video game study.

Bogost highlights in his analysis the importance of considering the ontological

differences between video games and poetry but ultimately does not allow those differences to

get in the way of thematic discussion more traditional to literary analysis. Comparing the play

experience of *The Sims* with that of Baudelaire's poem, Bogost observes that, like the speaker of

Baudelaire's poem, the player navigates the downtown area of *Hot Date* in a way that critically

mirrors today's "modern social space."[50] The choice of consumer experience provided here is

similar to that faced by Baudelaire's protagonist, enabling a multitude of "chance encounters for

both the player and the sim."[51] For example, "the sim can enter an arcade, sit on a street corner,

visit the beach, or stop by a club."[52] What distinguishes this chance encounter in *Hot Date* versus

the other works of Bogost's analysis appears to be a more explicit awareness of the chance

encounter concept. As opposed to Baudelaire's poem, in which the reader is confronted with the

experience of the chance encounter within the strict parameters written by the author, the player

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[49] Galloway, 2.

[50] Bogost, "Encounters across Platforms," 86.

[51] Bogost, 86.

[52] Bogost, 86.

is given several options on how to proceed with their encounters, guided by a fixed set of rules readily understood by the player.

The Sims provides for the player discontinuous time that is similar to turn-based games. Chess is a prime example of a turn-based game. With the exception of games with timed turns, each player is afforded the luxury of time to make their move before the game state changes. "Because the sim waits for the player's input by default," Bogost explains, "the game affords a unique perspective on chance encounters in the simulated and real world."[53] Certainly, the game cannot provide options anywhere close to the seemingly limitless interactive possibilities of a real environment, yet Bogost suggests that the simulation provides ample opportunity for players to fill in other possibilities using their imagination.[54] This observation suggests to me a sharp distinction between the discretely codified system of rules at play and the subjectivity of the player's actual play experience.

Bogost goes on to criticize this systematization of the chance encounter by highlighting the constraints placed on player choice by the system's designated rules, "a black box for social logic that has been compressed into a social rule that exists independently of the interactors."[55] The system ultimately erases the sublime contingency of the chance encounter by formulating a limited selection of absolute possibilities within a seemingly open-ended environment. In one sense, Bogost applauds this development of the chance encounter as a unit operation by placing so much safe distance between the player and the simulated choices they make, enabling a space for critical reflection or to "confer a value judgement on that behavior."[56] On the other hand,

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[53] Bogost, 87.

[54] Bogost, 87.

[55] Bogost, 88.

[56] Bogost, 88.

Bogost also states that the codified expression of the chance encounter "exposes [it] … as a unit operation ready for conceptual retirement."[57] What I think this statement implies is that the instantiation of the concept removes its abstraction and thus freedom of interpretation. The chance encounter is no longer a sublime force to confront as Baudelaire and Bukowski invoke the experience in their poems, an experience more felt or intuited than rationalized. Rather, the segmentation of the chance encounter as one of a limited number of choice interactions between sim and sim or sim and object suggests a developed stage of modernity in which certain experiences are no longer novel and mystifying. Instead of requiring interpretation through artistic sublimation, they instead have become so conventional as to enable manipulation within a simulation.

While software operates on a fundamentally physical level, the complexities of its mechanics and ease of user experience enable the segmentation of abstract concepts like the chance encounter, a segmentation not possible in other media. The chance encounter of poetry, literature, and film enables an open-endedness to interpretation on the part of the reader or viewer that cannot be captured entirely by text. Software manifests previously ineffable concepts through conventions of algorithmic experience bound by systematic rules. Bogost ends his analysis by stating that "videogames, like art of all kinds, has the power to influence and change human experience."[58] The ideological danger in this power is predominantly the ability of software to transform the irrational, emotionally driven side of human experience through a kind of false rationalization, instantiating abstract concepts into things seemingly concrete by means of the constructed negative space of an algorithmic software state. The extreme end of this

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[57] Bogost, 87.

[58] Bogost, 89.

theoretical trajectory is not simulations that are more realistic in their imitation of daily life but daily life that more and more resembles *The Sims*.

Perhaps the greatest strength of Bogost's unit operations approach is its interdisciplinary flexibility. On the surface, Will Wright's *The Sims* and Baudelaire's "A une passante" may seem to be wildly different works to even attempt to compare. To draw an analogy, the academic disciplines of game studies and literary studies are quite dissimilar as well in historical development and academic influence in terms of both their studied objects as well as conventional theoretical approaches to those objects. In turn, drawing together two very different objects, one from game studies and literary studies, might appear unproductive. However, this perfunctory reaction is due in part to the systematizing approaches so societally conditioned in every avenue of society, from the university down to the supermarket. While different forms of media carry distinct ontological differences that demand separate approaches and historical contextualization, much that is shared can, at the same time, be drastically overlooked, just as much of Bogost's unit concept analysis of the chance encounter is lost without its interdisciplinary comparison to Baudelaire's poem. Bogost's unit operations approach reveals the fruitfulness of interdisciplinary analysis by opening up connections between disparate media, the results of which more accurately reflect conventional experience in the mixed media forms of our increasingly visual society. The interdisciplinarity of Bogost's approach resembles the interdisciplinarity inherent to visual studies, a field that I argue holds great promise as an expansive approach to game studies, yet his analysis of *The Sims* still relies much on the game's procedural qualities. Thus, his analysis may yet benefit further through an extended analysis utilizing a more visually oriented lens.

Before surveying the field of visual studies in order to ask how game studies stands to benefit from it, one might ask what other directions are possible for Bogost's analysis when it comes to a more visually oriented approach. Later, I discuss how visual studies can work to further shape video game analysis. What visually stands out first to me in *The Sims* is its fixed, isometric perspective. Isometric perspective is a common video game perspective in which the camera provides an angled, overhead view of the game space similar to that of a chess player overseeing a chessboard. In what ways does this isometric perspective function expressively in *The Sims*, and how might it alter or at least extend Bogost's analysis of the chance encounter?

As discussed in the following chapter, different perspectives on video games carry varying expressive connotations rooted in visual art, many of which are ideological in nature. In general, the isometric perspective in video games is conventionally tied to strategic gaming, which requires a great deal of tactical thinking, such as in the real-time strategy (RTS) game *Command & Conquer* (1995) for PC. The perspective also confers a great degree of power and control on the player, placing them in a far more privileged position over the game than might be the case with a third-person fixed-angle perspective such as that used in the survival horror game *Resident Evil* (2002) for GameCube, a game which Bogost observes engenders fear in the player through a deliberate inability to control the camera.[59] In *Resident Evil*, the player is constantly placed in a position of vulnerability not only by the zombies and various other monsters out to get them but also by the fixed camera, which so often hides the player's view of what lies around the next corner, up the stairs, down the hall, or through the next door.

In contrast with *Resident Evil*, *The Sims* takes advantage of its isometric perspective to provide power and control to the player, positively affirming their safety within an environment

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[59] Bogost, "The Long Shot," 96-97. Bogost does not specify the original *Resident Evil* (1996) or the remake (2002), but both versions are equally relevant here.

fully at their disposal. This tactical view of the game space is bolstered by the affordability of

time, which Bogost observes allows the player time for reflection on the choices given to them.

Such reflection is far more restricted in *Resident Evil*, where only the pause button and a few safe

rooms give pause to the ever-looming threats stalking the environment. Both the tactical

viewpoint and the affordability of time provided by *The Sims* simulate the contemporary

experience of seeming consumer control over commodified experiences. Analyzed in this way,

The Sims represents the increasingly algorithmic nature of consumerism in daily life, wherein the

once contingent and often haphazard character of the chance encounter is quantified according to

a fixed set of interactions and their limited and often predictable pools of results. I should note

that *The Sims* draws upon a much different editing scheme than that utilized in *Resident Evil*.

Camera movement in *The Sims* is contiguous, meaning that as the player moves about the

environment, the camera pans around seamlessly without any break in the visual shot. In

contrast, the whole environment of *Resident Evil* is broken into a limited number of fixed shots

which often change depending on the specific location of the character.[60]

Because the player cannot control the camera in *Resident Evil*, there are many moments

when the player cannot even see what lies around the corner until they have navigated the

character there. This convention leads to a consistent feeling of entering the unknown for the

player, who is then forced to deal immediately with any met danger. In this way, *Resident Evil*

perhaps more relatedly expresses the chance encounter as envisioned by Baudelaire and

Bukowski than *The Sims* does. In sum, the unified camera of *The Sims* aids in the feeling of total

control over the gamespace, whereas the multitude of fixed camera angles in *Resident Evil* works

to instill a sense of helplessness in the player, adding to the already tense gameplay created by a

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[60] The stitched-together shots of *Resident Evil* are similarly used in *Fantasian*, a game that I analyze in
chapter 2.

combination of ever-encroaching dangers and the scarcity of weaponry and supplies the player must carefully manage throughout the game.

This extension of Bogost's analysis constitutes a small sample of ways in which emphasizing visual traits such as perspective and camera movement in video games can expand analysis in game studies. In the remaining chapters, I analyze a number of video games with a deliberate emphasis on such visual qualities as perspective and cinematic elements such as cutscenes and editing. Each of these qualities is steeped in a particular historical context which at present is often eluded in game studies, although these contexts are more prevalent in traditional disciplines such as art history and film studies. I argue that the field of visual studies offers novel approaches to artistic and scholarly work in game studies which may help extend video game analysis through a more deliberate emphasis on their visual traits.

In the remainder of this chapter, I give a brief overview of visual studies and outline ways in which video games might be brought under its purview as a formidable approach to video game analysis. In the following chapters, I provide examples of visual studies approaches to video games by addressing particular visual categories I argue to be of foremost importance for video game analysis. Among these are perspective in video games, cinematic montage in games, and the distinct visual expression of machinima and demoscenes, which, although quite different from video games proper, do share some essential qualities. In the final chapter, I provide an overview of games that I argue subvert conventional visual layouts and help instigate an ontological reimagining of the video game medium.

But first, a brief word on the formal area of game studies. In general, the field of game studies has grown into a relatively autonomous discipline with few forays across other fields. For the most part, video games seem to be treated as a distinctive medium with many ontological

attributes distinguishing them from other media, and these accepted distinctions have formulated entirely new critical approaches to video game analysis. In a review of Elliott M. Avedon and Brian Sutton-Smith's *The Study of Games* (1971), video game designer and scholar Jesper Juul credits early scholarly interest in computer games to "a change in object status" in games at large, noting that computer games seem distinctly different from more traditional games due to being "played on screens."[61] While Juul does not articulate exactly how this important feature distinguishes computer games from other types of games, he nonetheless recognizes that there is something fundamentally important about this feature. As Juul puts it, "screens somehow send the right signals."[62] I believe Juul's comment marks a moment of academic consciousness around video games, a sudden intellectual awareness of the prevalence of this relatively new medium in mass culture, a medium about which it is acknowledged that formalized approaches to its study have not yet been established.

It should be noted that Juul's article was featured in the seminal first issue of *Game Studies*, the "first issue of the first academic, peer-reviewed journal dedicated to computer game studies."[63] The academic affirmation of video games through the publication of *Game Studies* is partly the result of a historical consciousness around video games by the wider public. By 2001, video games had become a major industrial force and a popular medium well-known to the public at large, even if only a mere curiosity in academia by the standards of more conventional disciplines. Several home consoles had come and gone, with multiple large companies, including Sega, Sony, Microsoft, and Nintendo, competing for market share.[64] Technological

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[61] Juul, "The repeatedly lost art." See Avedon and Sutton-Smith, *The Study of Games*.

[62] Juul, "The repeatedly lost art."

[63] Aarseth, "Computer Game Studies, Year One."

[64] "2001 in video gaming."

advancements in the form of computing hardware and software capabilities also advanced

graphics and gameplay mechanics exponentially since the earliest days of simple, text- and

sprite-based games, feeding the impression amidst public consciousness that video games had

come a long way since their inception and were around to stay.

Only more recently does it appear that video game graphics have hit a plateau, having

achieved near photorealism in graphics capability. As a result, it seems as if developers are

pushing for differentiation in the market through distinct visual stylization rather than continuing

to push for photorealistic detailing. The multiplatform two-dimensional (2D) beat-em-up *River

City Girls* (2022), eschew three-dimensional (3D) graphical fidelity to instead quench players'

nostalgic thirst for nineties arcades, casino-like environments flush with bright and highly

stylized polygonal graphics, colored sprites invoking hand-drawn illustrations, chiming MIDI

sounds, and catchy music loops, all of which combined to form the highly charged electronic

aesthetic particular to video games at that time. Reflecting on the landscape of video games in

this present moment, it seems to me that this arcade-centric period marked a moment of

historical consciousness for the medium, affirmed by the inauguration of the *Game Studies*

journal in 2001.

From 2001 on, game studies discourse involved robust and diverse debates on the nature

of video games as a medium and how they should be approached through scholarly analysis.

Chief among these debates early on included an intense dialogue surrounding whether computer

games could be properly considered forms of narrative.[65] This debate pitted proponents of

narratology against those of ludology.[66] A more recent example of a theoretical approach to

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[65] For an example of one such take on the debate, see Juul, "A Clash between Game and Narrative."

[66] Wardrip-Fruin and Harrigan, eds., *First Person: New Media as Story*. This reader includes many key texts engaged in this debate.

video game analysis includes Galloway's categorization of various types of gamic action, as he outlines in *Gaming: Essays in Algorithmic Culture* (2006).[67] I do not attempt to provide here a complete history and survey of the development of game studies discourse, a topic which could constitute a tome unto itself. Rather, I emphasize that the long-term trajectory of game studies since its inception, which I date to the inaugural issue of the *Game Studies* scholarly journal, has largely focused on video games as configurative objects, such that the visual experience of games has been relegated to the configurative software governing the play experience.

The distinguishing characteristics of video games can be respected while contextualizing the medium within a larger history of visual media and visual culture at large, and I argue that doing so offers new opportunities for critical engagement with video games by artists, developers, scholars, critics, and other individuals and groups thoughtfully engaged with the medium. Game studies ought to embrace more connections across a wide array of visual fields, such as art history and cultural studies, in order not only to focus on what distinguishes video games from painting, photography, film, and the like but also to better understand how video games repeat and vary visual conventions embedded in visual culture at large, conventions which may be critiqued as ideological.[68]

While video games are distinctive visual media, their linkages to painting, photography, and film as integral mass media objects within visual culture at large make them ideal objects for analysis within the academic field of visual studies. The field of visual studies is a relatively new field of study, rooted in interdisciplinary and culturally critical approaches to painting and other

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[67] Galloway, "Gamic Action, Four Moments."

[68] Sikov, "From Screenplay to Film," 104. On this page, film scholar Ed Sikov gives the following definition for "convention," which I imply in my own use here and throughout: "[a] convention is *an artistic practice or process or device that is accepted and understood within a given culture* [emphasis the author's]."

visual artifacts. The field is not particularly indebted to the traditional approaches developed in art history, though it can be. The practical considerations of visual studies include not only a reconceptualization of image analysis—particularly after literary and media theorists W. J. T. Mitchell's consideration of visual studies as anti-epistemological, moving rather toward a "picture theory" of seeing pictures "as autonomous agents of conceptualization"—but also as a reshaping of departments by discipline, particularly on American campuses.[69] The field of visual studies also goes by other names, chief of which are visual culture and visual culture studies. The field of visual studies is sometimes capitalized, but oftentimes not, and I use it throughout this dissertation without capitalization.

Given the field's intentional aversion to an epistemological foundation, providing a strict definition of the field and a description of its methods proves difficult. The multitude of key texts characterizing visual studies emphasizes the continual problem of defining the field (i.e., Dikovitskaya, Elkins, Mitchell, and Moxey, among others).[70] Rather than providing thematic definitions of visual studies, it might be better to describe the field "*strategically* and *tactically*, in terms of specific problems and questions [emphasis the authors'][.]"[71] Thus, visual studies aims less to explain and rationalize any visual object than to question it, using the object more like a springboard for unbridled thought than a machine to be dissected, a machine whose parts are then categorically analyzed to the point of universalized conception. As such, visual studies approaches can be utilized as a tool for ideological critique, as ideological expression relies on conventions of meaning that are frequently taken for granted. However, while this characteristic

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[69] Brunet, "(Re)defining Visual Studies," section 2. See Mitchell, *Picture Theory*.

[70] Brunet, "(Re)defining Visual Studies," section 1. Scholar Francois Brunet explains in this section that there is "tremendous publishing output associated with the label 'visual studies,' [and] the continuing re-definition of this field[.]" Dikovitskaya, Elkins, Mitchell, and Moxey are among the key figures referenced in this article.

[71] Heywood and Sandywell, eds., "Critical Approaches," 5.

of the field grants flexibility for the viewing critic who is empowered by their own subjectivity in image interpretation, the same quality also makes for the field's weakness as there is acknowledgment going in that meaning is inherently unstable and, as such, any analysis will fall short of adequately explaining any visual object in full. The philosophy behind this approach is inherent even in explaining the field of visual studies itself, which resists stable categorization.

Despite the difficulty of arriving at a stable definition of visual studies, some generally agreed-upon characteristics of visual studies are given as follows. Art historian James Elkins emphasizes the interdisciplinarity inherent to visual studies, wherein contributors from a range of fields, often from different university compartments, come together to discuss and analyze images in ways alternative to traditional text-based approaches.[72] For art historian Margaret Dikovitskaya, visual studies rejects the privileging of high art and instead emphasizes the "'sensuous and semiotic particularity' of the cultural artefact."[73] According to writers Ian Heywood and Barry Sandywell, Dikovitskaya founds this approach from the standpoint of the University of Rochester's combining of art history with French linguistic and semiotic theory, which coincided with the rise of cultural studies in the university after 1968.[74] Heywood and Sandywell further underscore the following points by Dikovitskaya: Prior to the formation of visual studies, the notion of a high culture of visual art pervaded art history;[75] theory aimed to

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[72] Elkins, "Preface," vii.

[73] Dikovitskaya, "Major Theoretical Frameworks," 71, quoted in Heywood and Sandywell, "Editorial Introduction," 59.

[74] Heywood and Sandywell, 59. See Dikovitskaya, "Major Theoretical Frameworks."

[75] Heywood and Sandywell, 59-60. See Dikovitskaya, "Major Theoretical Frameworks."

discredit this idea and replace it with the notion that high-cultural art critique could only be defined in terms of its "'socio-political' significance."[76]

Additionally, according to Mitchell, visual studies emerged alongside a "pictorial turn" which began in critical theory as well as philosophy, a merging of art history with cultural studies.[77] Academic fields formerly predicated on "the pursuit of truth" were now turned on their heads as deconstructionists asserted that the humanities were themselves "artifacts of language."[78] Cultural theorist Raymond Williams' concept of culture as "a whole way of life" subsumed the study of culture as a sociopolitical manifestation, reflected by the selfsame objects of visual studies albeit within the realm of visual culture rather than culture at large.[79]

An analogy can be made between visual studies approaches and Bogost's unit operations. With unit operations, stable systems are deemphasized in favor of unit concepts that bear unstable meaning. Similarly, visual studies applies visual objects, which have been typically analyzed using the systematic approaches developed in art history, through a cultural studies lens, removing the privilege given to high art and generally favoring a semiotic approach that implies fluid meaning. Thus, when considering how to approach video games from the vantage point of visual studies broadly conceived, video game analysis should bear in mind the fluidity and polysemy of meaning, the sociopolitical influence engendering and produced by the work, and an ontological consideration of the game as a primarily visual cultural artifact. I emphasize this last point as video game analysis tends to be approached through more systematic analysis emphasizing the configurative systems at play in a work rather than emphasizing its visual

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[76] Heywood and Sandywell, 59-60. See Dikovitskaya, "Major Theoretical Frameworks."

[77] Dikovitskaya, "Visual Studies." See Mitchell, "Interdisciplinarity and Visual Culture."

[78] Dikovitskaya, "Visual Studies."

[79] Dikovitskaya, "Visual Studies." See Williams, *Culture and Society*.

phenomena. The underlying configuration of the medium should not be wholly ignored but instead allow for a more hybrid approach such as that exemplified in Bogost's unit operations, in which systems are considered in play with the fluid expression of unit concepts but are not given ultimate authority in determining the meaning of the work.

Before turning to additional excursions in the analysis of video games using visual studies, it is worth noting additional definitions with respect to these alternative terms, particularly given the sometimes synonymous use of visual culture and visual cultural studies with visual studies, as well as those terms' historical frameworks, to help frame video game analysis within a broader context, which stems farther back than the formal inauguration of game studies proper in 2001. Elkins points out that, in fact, cultural studies, visual culture, and visual studies, albeit sometimes used interchangeably, contain significant differences.[80] Cultural studies began during the late 1950s in England.[81] The field is represented by foundational texts such as Richard Hoggart's *The Uses of Literacy* (1957), Raymond Williams' *Culture and Society* (1958), and Stuart Hall's "Cultural Studies: Two Paradigms" (1980).[82] Cultural studies borrowed from a variety of disciplines, "including art history, anthropology, sociology, art criticism, film studies, gender and women's studies, and general cultural criticism, including journalism," and expanded to a number of countries, today representing a diverse and interdisciplinary academic field.[83]

By contrast, visual culture is primarily "an American movement and it is younger than cultural studies by several decades."[84] Art historian Michael Baxandall first used the term in

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[80] Elkins, "What Is Visual Studies?" 1.

[81] Elkins, 1.

[82] Elkins, 1.

[83] Elkins, 2.

[84] Elkins, 2.

Painting and Experience in Fifteenth-Century Italy (1972), yet visual culture as a field only first appeared during the 1990s.[85] Visual culture is considered less socio-critical than cultural studies, more closely aligned to art history, and more indebted to the philosophers and cultural critics Walter Benjamin and Roland Barthes.[86] Indeed, art historian Douglas Crimp describes visual culture as "a narrower area of cultural studies."[87] Crimp also remarks that "visual culture is the object of study in visual studies."[88]

On the topic of visual culture, I must note that as contemporary experience is increasingly digital, many daily life experiences within visual culture are also increasingly game-like, even if they might evade systematic consideration as video games. Digital society is leading to a merging of experiences wherein one does not simply watch a film or play a video game in a vacuum but also experiences life outside of video games and other mass media in ways similar to them. Times Square in New York City is one example where simply getting about town can invoke cinematic experiences like that of being in a movie theater. Thus, any mass visual medium bears some relation to visual culture at large. This fact further highlights the need for a visual studies orientation to game studies, particularly given the prominence of video games in mass culture today.

When it comes to defining visual culture, one definition given by Media and Communications scholar Marita Sturken is given as the "[c]ulture of images and visuality that

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[85] Elkins, 2.

[86] Elkins, 3.

[87] Crimp, "Getting the Warhol We Deserve," 52, quoted in Elkins, 4.

[88] Crimp, 52, quoted in Elkins, "Notes," 203. See note 5.

creates meaning in our world today."[89] As a field of study, Sturken asserts that visual culture refers to the interdisciplinary study of visuality and images in society at large.[90] According to Sturken, some of the major approaches to the analysis of visuality and images are those that treat them "across social arenas rather than as separate categories, including the impact of digital media on the circulation of images across social realms, the modern use of images from other social arenas … in art, and the cross-referencing of cultural forms displayed in popular culture and art," ultimately providing "an interdisciplinary approach to art-making."[91] Dikovitskaya wrote the first dissertation on the expansion of visual culture, appearing in 2001, and key books on the field include *In/Different Spaces: Place and Memory in Visual Culture* (1996) by Victor Burgin and *Art, Design, and Visual Culture* (1998) by Malcolm Barnard.[92] Survey texts include Chris Jenks' *Visual Culture* (1995), *The Visual Culture Reader* (1999) by Nicholas Mirzoeff, and *Practices of Looking: An Introduction to Visual Culture* (2001) by Marita Sturken and Lisa Cartwright.[93]

Compared with cultural studies and visual culture, visual studies is the most recent field, with the term for the field appearing early in the 1990s, and was inaugurated as an academic program through the Visual and Cultural Studies program at the University of Rochester.[94] According to Elkins, Mitchell characterizes visual studies as a combination of cultural studies,

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[89] Sturken, "Visual culture."

[90] Sturken, "Visual culture."

[91] Sturken, "Visual culture."

[92] Elkins, "What Is Visual Studies?" 4.

[93] Elkins, 4. It is notable that the first dissertation on the subject of visual culture's expansion appeared in the same year as the inauguration of the *Game Studies* journal because it suggests both a wider consciousness around visual culture at large as well as around video games as an integral object of visual culture.

[94] Elkins, 4.

art history, and literary theory aimed in conjunction toward what Mitchell coins the "pictorial turn."[95] Visual studies appears to not only be the most recent turn in visual analysis turning away from traditional art historical approaches but also the most popular, seeming perhaps to consolidate the influences of cultural studies and visual culture into a singular discipline also underlined heavily by postmodernity.

To highlight the emergent force of visual studies at present, a cursory web search of American-based visual studies degree programs provides the following conceptualizations of visual studies as academic and other sorts of professional training. Cornell University offers a minor in visual studies, highlighting interdisciplinary work between "visual art, media (including digital works), performance and perception," while connecting work between faculty from art history, "film, literary studies, psychology, theatre, and more."[96] Cornell University lists art, communication and media, gender and sexuality, and performance as "associated interests."[97] Harvard University connects visual studies to film through its PhD in Film and Visual Studies, which "aims to foster critical understanding of the interactions between the making of and thinking about film and video, between studio art, performance, and visual culture, and between different arts and pursuits whose objects are audio-visual entities."[98] The Ringling College of Art and Design emphasizes the interdisciplinary potentials of visual studies as a Bachelor of Arts (BA) degree "to allow students to self-direct their curriculum" and "offer maximum flexibility and exploration."[99] Colorado State University also promotes the interdisciplinarity of its BA in

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[95] Elkins, 4-5. See Mitchell, "Interdisciplinarity and Visual Culture."

[96] "Visual Studies," The College of Arts & Sciences.

[97] "Visual Studies," The College of Arts & Sciences.

[98] "Film and Visual Studies."

[99] "Visual Studies," Ringling College of Art and Design.

Art, Integrated Visual Studies Concentration, wherein students engage with "different forms of visual communication … [from] a variety of aesthetic, theoretical, scientific, economic, sociological and historical viewpoints."[100] While spotlighting its interdisciplinary curriculum, Temple University focuses its BA in Visual Studies around four main themes: "Identities; Narratives; Sites; and Global Citizens."[101] Lim College markets visual studies as visual training for business marketing in its Bachelor of Business Administration (BBA) degree program, referring to both the creative and the technological means of excelling in careers ranging from retail to exhibition installation, set design, and photo styling, among others.[102] Additionally, Georgian Court University offers an Art and Visual Studies focus with its BA degree program, which emphasizes artistic practice through an examination of a wide range of interdisciplinary areas including "photography, graphic design, publishing, and illustration along with … business administration, history, theory, and education."[103]

Colorado State University's program aims to "foster critical awareness of how society is reflected and produced through visual means in the 21st century."[104] The University of Pennsylvania's Visual Studies major is particularly concerned with preparing students to "acquire a critical awareness of seeing and the problems and possibilities for investigating, thinking, and writing about seeing in the 21st century."[105] In interdisciplinary fashion, its program aims to foster interdisciplinary connections between multiple departments, including

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[100] "Integrated Visual Studies."

[101] "BA in Visual Studies."

[102] "Careers in Visual Studies."

[103] "About."

[104] "Major in Art (BA)."

[105] "Program."

"Philosophy, Psychology, History of Art, Fine Arts, and Architecture."[106] The Visual Studies major at The University of Pennsylvania notably includes the study of vision along with that of images in its program description.[107] As it has been previously noted that visual studies ought to be considered via questions it addresses rather than by strict thematic definition, the University of Pennsylvania's Visual Studies program provides relevant inquiries as follows: "What do art and design look like when they are informed by understanding of the neurobiology of vision? How can theories and philosophies of vision enrich design, architecture, and communications? What if research into visual perception were shaped by the histories and cultures of seeing?"[108]

While not exclusively aimed at visual media, Virginia Commonwealth University's (VCU) own Media, Art, and Text (MATX) PhD program invites the application of media study from a broader historical context. MATX works between the school's Department of English, Robertson School of Media and Culture, and School of the Arts to foster original research or artistic practice concerning "the scholarly study of media, both old and new, broadly defined."[109] Although the program is open to a broad consideration of media, not exclusive to visual media, the program nonetheless echoes the essentially interdisciplinary aspirations of visual studies by encouraging work "across and between disciplines and media."[110]

While each of the aforementioned programs describes their curricula as interdisciplinary and provides a wealth of options in terms of potential objects for analysis not limited by their medium type, the explicit lack of video games as potential objects of study within these

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[106] "Program."

[107] "Program."

[108] "Visual Studies," Arts & Sciences.

[109] "PhD in Media, Art, & Text."

[110] "Media, Art and Text Program."

programs—although not explicitly barring them—perhaps reflects either a deeply ingrained academic prejudice against the medium or assumes a clear academic divide between game studies and other fields.[111]

On the latter point, I argue that game studies has become the traditional discipline for video games in the same way that art history has been the go-to discipline for a long time when it comes to the historical study of painting. Just as visual studies aims to break free of the systematic approaches conventional to art history, a visual studies approach to game studies may fruitfully introduce novel scholarly approaches to video game art and criticism, thus expanding the medium in new and beneficial ways.

What does a visual studies approach to video game analysis look like? Considering visual studies broadly, Elkins states that, within the field of visual studies, interpretation should be slow, an approach "whose author is more likely to doubt her disciplinary contexts and purposes."[112] In other words, while the analyst brings with them all the traditional methods and approaches given to them in their training, they ought not to rely on them or grant them unbridled authority. Rather, like Bogost's unit operations, systematic approaches should be thought of as tools for manipulating a particular unit concept, bearing in mind the fluid meaning of the signs before them. The hammer is brought to work on the nail but does not have a say in what the nail helps to build, to put it another way. Elkins goes on to state, "it is best if we [decide what to make of visual practices] in full awareness of the fact that the desire to interpret may take us in directions that ruin the very theories and concepts we want to use and even undermine our

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[111] Bogost, "Critical Networks," 171. For one example of academic prejudice surrounding programs focused on video games, see Bogost's reference on this page to the following article: Dean, "Gaming: Too Cool for School?"

[112] Elkins, "Envoi," 201.

understanding of the objects that we set out to study."[113] In other words, the incompatibility of an object with a particular system neither renders the system insufficient nor undermines one's subjective interpretation of the signs before them.

Figure 1. "*Stars over Half Moon Bay* (2007-2008)"[114]

Stars over Half Moon Bay (2007-2008), designed by Rod Humble, blends simple gameplay mechanics with a visual display of the player-drawn constellation. Thinking of this title procedurally without critical engagement with the image leaves much on the table regarding the plethora of analytical paths one may take. What might be made of the work's 2D visual plane or simple visual aesthetic? What can be made of the work's place as a game on one hand and

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[113] Elkins, 201.

[114] Humble, *Stars over Half Moon Bay*. My screenshot using Windows.

artistic influence on the other? Is there a socio-critical examination to be had here or not? If so, how might a socio-critical critique be approached in this work visually as well as mechanically?

These questions, among others, put visual studies to work in ways not yet or at least rarely conducted in the analysis of video games. Yet as I have examined throughout this chapter by ways of both Bogost's observations on the field as well as Galloway's characterization of video games, game studies in its current state emphasizes the procedurality of video games as systems before all else. Gameplay and mechanics are emphasized over their visual phenomena. Thus, while there is ample opportunity to examine visual representation in novel ways through the distinctive visual regimes of video games, a challenge also presents itself in applying a visual studies lens to video games when their distinctive orientation towards action is undeniable. In the following chapters, I hope to show opportunities for further analytical discourse in both ontological distinctions between video games and other media, such as film and painting, as well as areas where systematic ontological boundaries blur into the wider realm of visual culture at large.

Chapter 2: Perspective in Art History and Video Games

While many video game players, both enthusiasts and casual gamers alike, would readily agree that video games are a reliable means of escape from much of the unpleasantness of life, perhaps the greatest irony of the medium is that video games do not provide such a means of escape but instead construct our vision of reality, constituting our identities and restricting our freedoms of choice and even thought. While video games are radically distinct from other visual media, which also share responsibility in forming the many ideologies that daily perfuse mass culture, they specifically share with painting, photography, and film the dominant ideological authority of our modern age, linear perspective. Linear perspective emerged out of the tradition of Renaissance painting, and artists, commentators, and public audiences alike have unquestionably associated images that utilize linear perspective with the notion of universal truth. This commonly accepted notion of an unfettered, objective visual reality that can be accessed through linear perspective has likewise pervaded photography, film, and, most prominently today, video games.

Resistance to perspectival ideology in video games is attained in two ways: 1) Designers and artists must more consciously utilize abstraction in video game visuals and gameplay mechanics to better attest to a multiplicity of perspectives, and 2) game studies scholars must acknowledge the larger historical influence of perspective in painting, photography, and film on video games, and the same scholars must actively interpret video game expression along these larger historical trends, with less focus on video games as objects uniquely distinguished from other media. Regarding this latter point, scholars can draw much aid from the more recent field of visual studies.

Linear perspective is a part of a larger visual arts trend called perspectivism, which "covers a variety of techniques for representing space by creating the illusion of three dimensions on a two dimensional surface such as a canvas or paper."[115] Western painters from the Renaissance onward have favored making a picture appear three-dimensional, for instance, by representing an object smaller in a picture the further it should appear if represented mimetically, a convention "which the viewer interprets as a visual code for depth."[116] Painters have relied both on mathematical and intuitive methods for achieving the illusion of three-dimensional space, although many artists, such as Ancient Egyptian artists and modern painters, have been disinterested in perspectival painting.[117]

Various other techniques for depicting three-dimensional space include the use of aerial perspective, linear perspective, overlapping, a horizon line, implying viewpoints, and spatial distortion.[118] Artists further use lighting as a tool for accentuating depth in a painting, wherein objects "are paler where the light falls and darker in shadow."[119] In *The Execution of Lady Jane Grey* (1833), French painter Paul Delaroche uses angled frontal lighting to spotlight the figure of Jane Grey in the foreground whilst natural shadows cast over her lady-in-waiting and other figures who form the backdrop of the painting.[120]

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[115] Little, "Perspectivism," 30.

[116] Chilvers et al., "Perspective and viewpoint," 20. Chilvers et al. are listed as contributors to this book, but no author is specifically attributed to any chapters referenced here.

[117] Chilvers et al., 20.

[118] Chilvers et al., 20-21.

[119] Chilvers et al., "Light and shade," 22.

[120] Chilvers et al., 22.

Linear perspective, the most common perspectival technique, creates the illusion of depth

via the recession of all actual or imaginary lines toward a single vanishing point, thus uniting all

of the objects of the artwork within a unified space.[121] An example of linear perspective is found

in English painter David Cox's *The Poplar Avenue* (c. 1820), in which a vanishing point appears

to draw together the lines forming each side of the road.[122] The artist depicts a small horseback

figure at the vanishing point, drawing the viewer's eye along the receding road.[123] The illusion

depicted in *The Poplar Avenue* mirrors the same phenomenon of sight available when looking

down a road in real life: "If you look down a straight road, the sides appear to converge in the

distance. Eventually they seem to join up, at a point known as the vanishing point. You know

that the road sides do not actually meet, but you interpret it as a sign of distance."[124] At its

simplest, this illustration forms the basis for linear perspective, which also goes by the names

single viewpoint perspective and one-point perspective.[125]

Italian Renaissance writer Leon Battista Alberti first codified linear perspective in his

treatise entitled *De pictura* (1435-1436), in which "[h]e describes a step-by-step procedure for

the portrayal of parallel lines passing to the 'centric point' (later called the vanishing point) and

how to determine the correct intervals for horizontal lines at progressively deeper positions in

space … ."[126] While Alberti coined the notion of linear perspective in writing, Filippo

Brunelleschi, a Florentine architect and sculptor, first invented the technique through his

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[121] Little, "Perspectivism," 30-31.

[122] Chilvers et al., "Perspective and viewpoint," 20.

[123] Chilvers et al., 20.

[124] Chilvers et al., 20.

[125] Chilvers et al., 20.

[126] Bell, "Perspective."

"demonstration panels of the Baptistery and Palazzo Vecchio in Florence," and Florentine artists

such as Donatello and Masaccio had developed Brunelleschi's technique in their own works "in

the mid-1420s."[127] Donatello utilized "a simple form of the convergence of parallel lines" in his

"relief *St George and the Dragon* (c. 1417[)]," while in Masaccio's *Trinity* (c. 1425-1427),

Masaccio had "the ribs of the coffered barrel vault converge assertively towards a vanishing

point[,] … locating God, Christ, the Virgin and St John in a box of illusionistic space[.]"[128]

Scholars generally locate the origins of perspective at these three pivotal moments:

Brunelleschi's demonstration panels, Masaccio's *Trinity*, and Alberti's *De pictura*.[129]

Prior to the Renaissance, two-dimensional art prevailed in most regions, including sub-

Saharan Africa, Egypt, Mesopotamia, China, Japan, and the Americas, as well as throughout

medieval Europe, although the perspectival technique known as foreshortening, or the

application of perspective to an individual object, was utilized, albeit infrequently.[130] An

example of foreshortening appears in the reconstruction of a tomb painting from Thebes, *Ship*,

dated 1360 BCE, in which the sail of a ship is shown as it would be seen from the front of the

ship while the remainder of the vessel is shown in profile.[131]

Gestures toward three-dimensional perspective in ancient art also appear in limited form

through twisted perspective, through which prominent details are configured within the depiction

of space according to their symbolic significance even if their depictions conflict with a more

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[127] Bell, "Perspective."

[128] Bell, "Perspective."

[129] Elkins, "Into the Maelstrom of Metaphor," 7.

[130] Brener, "Art before the Third Dimension," 14.

[131] Brener, 14-15.

realistic representation of space.[132] Twisted perspective is exemplified in the Egyptian art

convention known as the "law of frontality," which totally restricts the depiction of any partial

surfaces or foreshortened sides.[133] As art history scholar Milton Brener puts it, as long as an artist

found it aesthetically pleasing, giving "a right-facing figure two left feet … [was] a matter of

apparent indifference to the spatial and aesthetic perceptions of the Egyptians," as has sometimes

been the case when Egyptian artists depicted a subject's feet in order to emphasize the visually

pleasing effect of both of their arches, even if the work resulted in the depiction of "a right-

facing figure [with] two left feet."[134] In Egyptian art as well as elsewhere until the Renaissance,

differentiation in size is used to suggest importance rather than to depict distance.[135] As

examples, paintings on rock outcroppings from Spain that are twelve- to eighteen-thousand years

old reveal elongated legs and torsos to aggrandize the male hunter subjects in hunting and battle

scenes, whilst engravings and sculptures from southwestern Europe exaggerate the buttocks,

breasts, and vulvas of female bodies while omitting their faces.[136]

 Yet, as Brener argues, the limited use of perspective before the Renaissance was not due

to an inability for artists to do so but rather because of "a different mindset, a different mentality

and a different sense of aesthetics, both in the artists and in the population in general."[137]

Another possibility, Brener posits, results from the larger acceptance and utilization of projective

geometry, whose laws are "similar to those of the basic plane geometry developed by Euclid, a

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[132] Brener, 16.

[133] Brener, 16.

[134] Brener, 17.

[135] Brener, 18-19.

[136] Brener, 19.

[137] Brener, 21.

Greek mathematician, at about 300 B.C.," of which the most important difference is the ousting

of parallel lines in basic plane geometry in favor of converging lines.[138] At any rate, despite the

centuries-old discovery of "laws of optics," as put down by Euclid, artists all over neglected the

mimetic depiction of depth according to human vision, at least "[u]ntil the time of Giotto in the

14th century."[139]

From the 1430s and on, prominent artists speedily adopted the technique of linear

perspective.[140] In his painting *Annunciation* (1474), Italian artist Leonardo da Vinci exemplifies

the use of a single vanishing point to unify the Virgin Mary and the angel Gabriel within the

same space; the pictorial space appears to recede convincingly in the direction of the horizon

line.[141] Artists in Europe beginning in the sixteenth century were progressively expected to know

and apply the basics of perspective, and treatises began to be published to teach principles of

perspective, the first of which include Jean Pélerin's *De artificiali perspectiva* (1505).[142] By the

seventeenth and eighteenth centuries, the basic principles of perspective were assumed and new

treatises appear, including Brook Taylor's *Linear Perspective* (1715) and Joshua Kirby and

Thomas Malton's *A Complete Treatise on Perspective in Theory and Practice on the True

Principles of Brook Taylor* (1779).[143] Perspective only ceased to be taken for granted when it

was upended by the twentieth-century avant-garde movement, for example, with the pluralistic

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[138] Brener, 22-23.

[139] Brener, 23.

[140] Bell, "Perspective."

[141] Little, "Perspectivism," 30.

[142] Bell, "Perspective."

[143] Bell, "Perspective."

viewpoints depicted by the Cubists.[144] Cubist painters such as Spanish painters Pablo Picasso and

Juan Gris drew inspiration from an increasing awareness of nonwestern art and had less concern

for the realistic representation of "depth and volume in their work."[145] Picasso's *Les Demoiselles*

d'Avignon (1906-1907) upends the traditional use of perspective by combining "geometric and

primitivist styles … inspired by Iberian sculpture and African art.[146] In *Pierrot* (1919), from a

series depicting pierrots, or sad clowns, Juan Gris portrays the pierrot subject with an assembly

"of geometric shapes," typical of the nontraditional style.[147] Abstract art and surrealism, among

other nontraditional artistic movements, also forged new areas for nontraditional art.[148] However,

a renewed interest in traditional approaches appeared from the 1960s onward, "reinforced by the

perspectival base of computer-aided design."[149] The revival of perspective in art produced at

least in part with the aid of computers mirrors the revival of proceduralist-oriented criticism in

video game studies, as the field seems to have largely coalesced around discourses of video game

ontology centered on their governing rules, constraints, and mechanics.

Scholars have noted the mathematical basis for the immersive representation of space and

games, even if an explicit connection to perspectival techniques in visual art has been largely

neglected. For example, video game scholar Altuğ Işığan affirms that the mathematical basis for

the illusion of movement within a navigable space, whereupon "one's body in physical space

occupies the visual center on which the scenographic arrangement relies in order to function,"

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[144] Bell, "Perspective."

[145] Chilvers et al., "Cubism," 416.

[146] Chilvers et al., "Cubism," 418.

[147] Chilvers et al., "Cubism," 416.

[148] Chilvers et al., "Birth of Abstract Art," 434. And Chilvers et al., "Surrealism," 570.

[149] Bell, "Perspective."

originates from the use of Euclidian geometry in ancient theatre and was revived during the Renaissance.[150] As noted earlier, Brener posits the awareness of Euclidian basic plane geometry prior to the development of linear perspective.[151] As such, while perspective is a signifying trait of video games, the mathematical qualities of video games are fundamental in their academic and industrial conceptions, which center around such characteristics as rules, constraints, procedures, and the like. As game designer and critic Eric Zimmerman points out in response to another designer, Gonzalo Frasca, regarding Frasca's concern regarding limitations governing *The Sims*, "constraints are the raw material out of which games are made."[152] Zimmerman's reply is perhaps an expected viewpoint given that designers work first-hand with the raw materials going into the production of a game, from hardware selection to software coding and graphic design.[153] Yet while players certainly experience the constraints built into the game from a user perspective, they are nonetheless accosted by a visual panoply of signifiers which make up much of the actual gameplay experience and which should constitute the primary field of objects for semiotic analysis.

Before moving further into the use of perspective in video games, it is important to provide at least a brief survey of nonlinear perspective. Although scholars have given less attention to nonlinear perspective than linear perspective, the usage of nonlinear perspective is diverse and has origins predating the Renaissance.[154] Referring back to da Vinci's *Annunciation*,

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[150] Işığan, "The production of subject."

[151] Brener, "Art before the Third Dimension," 22-23.

[152] Zimmerman, "From Eric Zimmerman's Online Response," 89. Zimmerman responds to Frasca, "Video games of the Oppressed." See also Zimmerman, "Eric Zimmerman's response" for the full response online.

[153] For an excellent reader from game design perspectives, see Salen and Zimmerman, eds., *The Game Design Reader*.

[154] Bell, "Perspective."

not only is the mountain painted smaller than other objects, showing distance through its relatively diminutive proportions, the effect is made more so by an innovation of da Vinci's known as aerial perspective, in which distant objects appear bluer and paler than nearer objects due to the effects of the atmosphere.[155] Also called atmospheric perspective, aerial perspective is common in landscape paintings and has also been utilized in Chinese landscape painting, as exemplified by Ma Yuan's *Willows and Distant Mountains* (Song Dynasty, 960-1279).[156] In truth, linear perspective has frequently been accompanied by nonlinear perspective techniques, such as in da Vinci's *Annunciation*, although nonlinear and other forms of perspective such as anamorphis have largely been neglected by scholars.[157] Rather than relying on mathematics to converge real and imaginary lines toward a vanishing point, nonlinear perspective relies on gradients of color, shading, light, and lines to create the illusion of depth.[158] Nonlinear perspective is further differentiated from linear perspective by not relying on mathematics for theoretical coherency.[159] Nonlinear perspective in painting bears important relevance to nonconventional video games which bear expression through means which exclude the use of linear perspective or any other technique to immerse the player in a realistic space.

Video games rely heavily on principles of linear perspective to create realistic images, specifically through perspective projection. Artist and game development authority Matej 'Retro' Jan states that geometry forms the basis for creating convincingly realistic 3D spaces in video

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[155] Little, "Perspectivism," 31.

[156] Chilvers et al., "Perspective and viewpoint," 20.

[157] Bell, "Perspective."

[158] Bell, "Perspective."

[159] Bell, "Perspective."

games.[160] For a game developer to create a correct sense of perspective in an image requires

technical expertise in coding over creative expression: "Drawing in its essence is describing

three-dimensional objects on a two-dimensional surface. If we forget about style, it is a process

governed [*sic*] by precise rules."[161] In general, video games utilize two types of graphical

projections for projecting images onto a screen: linear and curvilinear.[162] Of these, linear

projection features far more subcategories of projection, including 1-, 2-, and 3-point

perspective, as well as Frankenstein, Oblique, and Orthographic projections, among others.[163] By

contrast, only curvilinear and stylized perspective, a form of curvilinear perspective, stand apart

from linear projections.[164]

While linear projections incorporate straight lines throughout the image, curvilinear

perspective allows straight lines to become curved; curvilinear projection is used far less

frequently than linear projection.[165] Regarding forms of linear projection, many video games

utilize parallel projections for their graphics, projections in which all lines are parallel; in

contrast, perspective projections project lines toward vanishing points instead of keeping them

parallel.[166] Perspective projection has the effect of making an image "more immersive, like

you're right there in the picture. Parallel projection on the other hand looks more distant, like

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[160] Jan, "Game developer's guide."

[161] Jan, "Game developer's guide."

[162] Jan, "Game developer's guide."

[163] Jan, "Game developer's guide."

[164] Jan, "Game developer's guide."

[165] Jan, "Game developer's guide."

[166] Jan, "Game developer's guide."

you're staring at the scene from far away (with good binoculars)."[167] Thus, perspective

projection in video games closely resembles the spatial effect of linear perspective in painting. It

is worth noting that some of the most popular big-budget titles in the commercial sector, such as

Elden Ring (2022), *Horizon: Forbidden West* (2022), *Pokémon Legends: Arceus* (2022), and

Dying Light 2 (2022),[168] are often ones that utilize perspective projection. In general, the most

popular genres of best-selling blockbuster games are probably first-person shooter (FPS) and

third-person action games, the latter of which can also include third-person shooters.

A simpler, less technical categorization for distinguishing perspective in video games

distinguishes between first-person, third-person, aerial, and 2D, or scrolling view.[169] The use of

perspective projection in video games is perhaps best exemplified in the FPS genre, one of the

predominant genres of first-person perspective video games along with racing or flight games.

First-person video game perspective allows the player to "view the game world through the main

characters [*sic*] field of vision," which can vary from the viewpoint of the player or vehicle.[170]

FPS games such as the PC games *Doom* (1993) and *Return to Castle Wolfenstein* (2001)

typically present the player-shooter's viewpoint, whereas racing and flight games frequently

present the options of either first-person perspective from a cockpit, or the third-person

presentation of a vehicle.[171] The advantages of first-person perspective include enhanced

immersion, due to the realistic movement on offer, and increased accuracy, thanks to the

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[167] Jan, "Game developer's guide."

[168] Tailby, "February 2022 NPD."

[169] "Video Game Perspective."

[170] "Video Game Perspective."

[171] "Video Game Perspective."

perspective's narrower and more detailed field of view.[172] While the narrower field of view provides the player a strong sense of spatial immersion, this view also limits the sheer amount of space that can be seen, creating blind spots similar to those experienced in the real world.[173]

In FPS games, players are tasked with navigating levels and dispatching enemies by orienting themselves and their weapons with the visual aid of a crosshair symbol permanently fixed at the center of the screen. In this case, the illusion of perspective mirrors that of painting in attempting to imitate the perspectival optics of human vision: Objects closer to the eye appear larger while those farther away appear smaller. In the same way, bullets or other projectiles fired by the player diminish in size as they approach the crosshair, as defined by the underlying geometrical lines which construct the game space and dictate the physics of that space. If bullets travel too fast for the eye to notice the diminution made possible by projectile modeling, the impression of increasing distance between the player and the target is emphasized through other cues. Visual and sound cues both operate according to the programmed rules of the underlying game engine to signify the interval between the initial projectile firing and the success or failure of hitting the intended target.

For example, in the multiplatform tactical FPS game *Counter-Strike: Global Offensive* (*CS: GO*) (2012), guns have different rules governing various traits such as accuracy or rate of fire. Firing a gun rapidly by holding down the trigger button causes gunfire to spray, which means creating a widening area of fire around the crosshair relative to the duration in which the trigger is held. This method of firing is much less accurate than single firing a weapon with the individual clicks of a button. To put it another way, engaging the trigger button to fire one bullet

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[172] "Video Game Perspective."

[173] "Video Game Perspective."

at a time increases the accuracy with which a bullet will reliably land at the center of the crosshair, whereas holding down the trigger button increases the rate of fire at the cost of accuracy. The longer the trigger is held, the wider the spray of bullets; the gun may also steadily rise above the initial firing point, further decreasing the player's accuracy. The fear and anxiety of crossing paths with an enemy combatant can overcome the player once they encounter the player and engage in a sudden firefight, such that they hold the trigger and hope for the best rather than focusing on aiming and firing with single clicks to enhance accuracy.

The gameplay flow of *CS: GO* frequently involves a tense exchange between players heading toward each other through a somewhat constrictive map, an exchange typically complemented by a bevy of visual and audial cues confirming a scattering of successful shots often fired somewhat randomly. This exhilarating high can lead to a cathartic feeling of success if the player manages to take out the other player. Alternatively, the player may meet a sudden deflation of adrenaline if they are instead met with the switch of the camera, which in *CS: GO* signifies the player's death either by a jump to a detached, third-person view of the player's corpse, or, as in other variations of the *CS: GO* formula, such as in the PC game *Valorant* (2020), by a replay playing back the final moments of the player's climactic confrontation with the enemy combatant.

Thus, a multitude of sensory output, visual, spatial, and audial, converge to provide the player a palpable sense of immersion within the game space, and an overall sense of perspective, united at the crosshair, unites the game's signs and enables them to work in harmony. Just as the vanishing point governs both the real and imaginary lines of a painting, and the size and location of objects in a picture, to enable a scene that realistically imitates the perspectival optics of

human vision, so too does the FPS crosshair govern the real and imaginary lines of the game space, the movement of bullets, and the size and location of objects in the game.

Note that perspective projection can feature more than one vanishing point, just as a painting can involve multiple vanishing points. In video games, a vanishing point can exist at the intersection of either parallel lines, horizontal lines, vertical lines, or some combination of these.[174] In some sense, vanishing points are, it seems, theoretical rather than actual. In a technical sense, as Jan states, [c]omputers don't see a difference between them at all and … all perspective images have an infinite number of vanishing points[.]"[175] In any case, one series of parallel lines must be tied to a vanishing point to properly depict realistic depth before adding additional vanishing points utilizing horizontal or vertical lines. The crosshair is centered at the convergence of these receding parallel lines.

While the FPS genre is among the most popular video game genres, third-person shooter, action, and other genres also utilize perspective projection. In some games, the player can also switch between first- and third-person perspectives. The third-person perspective (e.g., the Nintendo 64 platforming game *Super Mario 64* [1996] and the PlayStation 2 adventure shooter game *Uncharted: Drake's Fortune* [2007]) allows the player to see as well as control the in-game character by providing an aerial camera angle that hovers closely behind the character.[176] The third-person perspective provides the player a wider visual frame showing their rear and peripheral surroundings, overcoming the aforementioned blind spots that come with the first-person perspective.[177] The third-person perspective often provides the freedom of sight via a

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[174] Jan, "Game developer's guide."

[175] Jan, "Game developer's guide."

[176] "Video Game Perspective."

[177] "Video Game Perspective."

player-controlled camera, allowing the player to move the camera around their avatar and change

the subject distance on the fly.[178]

In terms of their overall gameplay, however, few differences actually distinguish the first-

person and third-person perspectives, at least when it comes to the shooter genre. The major

difference is that the camera is not placed directly where the player's eyes would be; rather, the

camera is situated just behind the player's avatar or over one shoulder (the player often has the

option to choose which shoulder, even on the fly). Gunplay and navigation are still governed by

the crosshair stationed at the center of the screen. The difference in first-person and third-person

camera perspectives in shooter games mainly comes down to the presentation of the narrative, or

the involvement of collaborative mechanics, in some third-person games, as I will elaborate

briefly on next.

In literature, the first-person and third-person perspectives are differentiated in that a

first-person narrator is often limited to the experiences of the character from whose perspective

the story is told, while a third-person narrator will often jump between characters and around the

world, thus providing more information to the reader which one or more characters may not

necessarily be privy to. As literary scholar Sharon Hamilton explains, "third-person point of

view … presents a narrator that has a much broader view and, usually, an objective perspective

on characters and events."[179] In the Xbox FPS game *Halo: Combat Evolved* (2001), players

experience the story from the unique vantage point of Master Chief. Players rarely receive

information outside of what they receive while playing as Master Chief, with the exception of a

few non-interactive cinematic films, for some of which Master Chief is not even present. Thus,

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[178] Writer Dan Carr defines subject distance as "the distance between the focal plane of a camera and the subject being photographed." Carr, "Subject Distance."

[179] Hamilton, "Third-Person," 114. See also the second edition (2016).

while a first-person vantage point occupies the space of both the gameplay and the majority of narration throughout the game, third-person narration does punctuate the game during certain cutscenes. This use of both perspectives for narration is distinct in video games as perspective in literature tends to keep more consistent.

Third-person shooters and other third-person action games provide a wider narrative scope via the vantage points of multiple characters. The teamwork puzzle game genre also employs the third-person perspective for the purpose of creating intricate puzzles, the different parts of which must be solved individually prior to solving some larger puzzle that ties the separate parts together. This genre may require the player to switch between avatars with unique abilities in order to strategically solve a puzzle, defeat enemies, or navigate a level.[180] While not a shooter in the traditional sense of the genre, the GameCube survival horror game *Resident Evil 0* (2002) requires the player to swap between two main protagonists to solve puzzles in order to open up the way for each character to progress.[181] Third-person perspective also supports the narrative flavor of the game world where there are multiple protagonists working as a team, such as in the squad-based Xbox shooter *Brute Force* (2003). Swapping between characters in first-person perspective could potentially confuse the player's orientation with their character, disrupting their understanding of the game's narrative.

Video games are a diverse medium with many variations and exceptions to the genre-defining traits I have just described. For example, the Xbox game *Panzer Dragoon Orta* (2003) is an on-rails third-person shooter game that is on rails. In a rail shooter, the player's avatar moves through a pre-defined path through the level. While the player has no control (or limited

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[180] "Teamwork Puzzle Game."

[181] "Teamwork Puzzle Game." I add that the survival horror genre of video games features puzzles heavily. *Resident Evil 0* is a cross-genre combining survival horror and teamwork puzzle game.

control) over their avatar's movement, they are able to move the crosshair throughout the space. In some cases, such as in *Panzer Dragoon Orta*, the player may even move the crosshair freely within a 360-degree range of motion, though their avatar is still automatically directed through a mostly pre-determined unidirectional path through the level, and the player still has only limited control over the movements of their avatar. Unlike in the FPS genre and in some third-person shooter games, the crosshair in rail shooters does not necessarily function as the primary vanishing point. The environment at large presents its own sense of receding space from whichever direction the player is looking.

In this sense, the crosshair has less agency as a totally unifying force in the game's expression than it does in FPS games. Indeed, rail shooters are akin to a city bus tour where the player is the only rider, has one or a few weapons, and is tasked with eliminating as many targets as they can find from the beginning to the end of the bus's route. The challenge in *Panzer Dragoon Orta* lies mainly in performing as well as possible, particularly due to the fact that the player can only observe one of four vantage points at any given time. Levels play out the same each time, so players naturally perform better upon revisiting each level after having learned the timing and location of enemies throughout. Needing to repeat levels in a rail shooter in order to improve one's score leads to a satisfying feeling of accomplishment earned from the repetition of a task, leading to proficiency. This experience is not unlike that of learning a musical piece from beginning to end. The rail shooter genre derives its value from this sort of incremental skill-based player progression. While FPS games also develop skill-based progression by seeing the player repeatedly through new and familiar combat situations and through the player's increasing familiarity with map layouts, the spatial layout is nonetheless much more open-ended than in an on-rails shooter like *Panzer Dragoon Orta*. Thus, the FPS genre derives more value from the

satisfaction provided via a freer sense of exploration over that of an incremental mastery over a more limited space.

Indeed, although *Panzer Dragoon Orta* utilizes vanishing points as an important aspect of its gameplay and visual presentation, the crosshair does not provide the player the same amount of control as it does in FPS games. In the PC and Xbox FPS *Halo 4* (2012), the aim of the gun and the movement of the player are both determined via the crosshair fixed at the center of the screen. The crosshair instructs the movement of the entire game space and action. In *Panzer Dragoon Orta*, the crosshair moves about the screen independently from the player-operated camera position, the limited movement of the player's avatar along the course, and the continuous, automated progression of the level route from beginning to end. Thus, in its reliance on an assortment of other mechanics and visuals disconnected from a static, centered crosshair, *Panzer Dragoon Orta* subverts the hegemonic dependency on linear perspective to which visual art has been so subservient. Indeed, video games are an extension of this artistic dependence, reconstituted in film and now taken for granted as a privileged criterion in visual representation throughout mass culture.
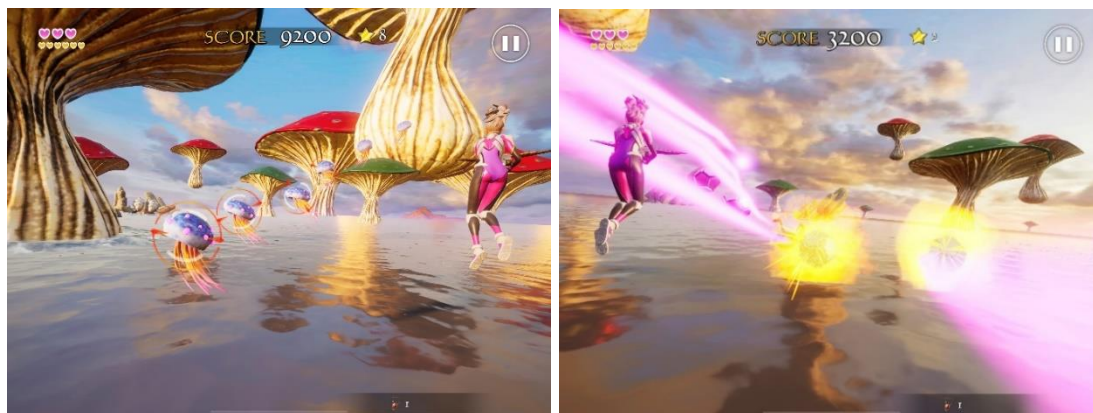
Figure 2. "*Air Twister* (2022)"[182]

In Yu Suzuki's *Air Twister* (2022), a rail shooter for Apple Arcade, the crosshair, although not visible, moves along with the protagonist as she navigates the screen. Here, the character advances in an on-rails fashion through the level. Enemies who cross her path are highlighted by red targeting reticles, as evidenced in the image on the left. The character can fire from anywhere on the screen once enemies are targeted, allowing projectiles to hone in on all targeted enemies, as evidenced on the right. Unlike in *Panzer Dragoon Orta*, the player in *Air Twister* does not have the luxury of switching the camera to the left side, right side, or rear of the character.

Rail shooters and far more varying genres of video games, including 2D platforming games, such as the NES game *Super Mario Bros.* (1985), and isometric strategy games, such as the PC games *StarCraft* (1998) and *StarCraft II: Wings of Liberty* (2010), make up only a sliver of the variety of genres represented by video games. They may utilize the crosshair in very different ways or not at all, and linear perspective is certainly equally as meaningful in every title that uses it. Similarly, paintings that utilize linear perspective do not represent the entirety of the art world. Yet critical awareness of linear perspective is still useful because the technique carries

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[182] Suzuki, *Air Twister*. My screenshots using iPad.

with it the underlying convention that images that imitate the eye's perception of reality are somehow vessels of universal truth, an ideological assumption that developed in Renaissance painting and guided representational expression to the present day.

Figure 3. "*Duelyst* (2016)"[183]

Duelyst (2016), a combination of card and war board game for the PC, presents both a 2D navigable space in the form of a partially transparent tile board and the illusion of infinitely receding space which extends behind the tile board. On the tile board, the player can move units to adjacent spaces left, right, up, down, or diagonally. This spatial navigation collides with a visual space which projects an infinitely expanding environment. The horizontal lines of the grid are directed toward an offscreen vanishing point so that the top-row grids appear somewhat smaller than the bottom-row grids. The abstract presentation of game pieces and realistic depiction of infinitely receding space invoke a tension that is representative of the contemporary

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[183] Lang, Homes, and Cuervo, "*Duelyst*." Image from Lien, "Duelyst screenshots and concept art."

player-subject's daily experience in both digital and non-digital spaces. *Duelyst* is no longer

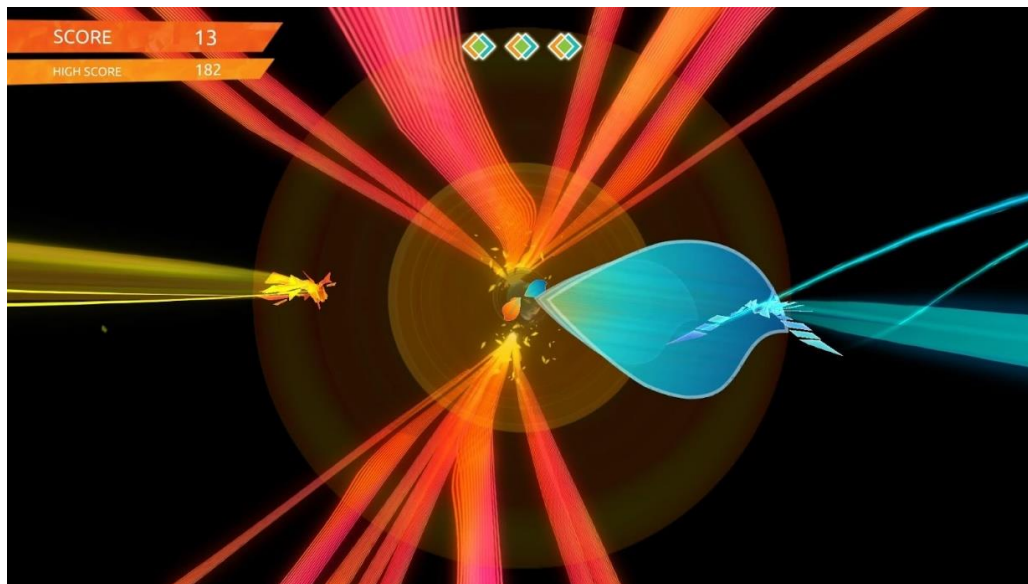playable since its shutdown in February of 2020.[184]

Figure 4. "*Entwined* (2014)"[185]

Entwined (2014), a music rhythm game,[186] operates with simple adherence to linear

perspective. The goal of the game is to simultaneously navigate an orange unit (left side) and

blue unit (right side) through shaped gates of the matching color, which always appear along the

outer ring of the tunnel space. In this challenge level, play continues indefinitely until three gates

are missed. Although each unit is given the illusion of movement toward an infinitely receding

vanishing point, successfully playing the level requires the player to defocus their gaze, allowing

peripheral vision to guide both the orange and blue units through successive gates in quick

succession. This refreshing and satisfying unconventional approach inverts the direct, free, and

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[184] Yin-Poole, "Duelyst shuts down in February 2020."

[185] Robilliard, *Entwined*. My screenshot using PlayStation 4 Capture Gallery.

[186] "*Entwined* (video game)."

destructive play common to FPS games, which depend upon the twitchy precision of crosshairs. Despite my own enjoyment of the game, *Entwined* was received poorly by critics and many players.[187]

While not necessarily utilizing linear perspective, isometric and other forms of aerial perspective games bear mentioning within the larger discourse regarding perspective in video games. Aerial perspective (e.g., the Nintendo Game Boy role-playing game [RPG] *Pokémon* [1998] and Nintendo 64 tactical RPG *Ogre Battle 64* [2000]) provides an overhead perspective of a character and is used to provide spatial context of "the characters and the area around them from above."[188] Aerial perspective is similar to the bird's-eye-view shot, also known as the overhead shot or elevated shot, frequently used in film.[189] The difference between the two is similar to the difference between the uses of the first-person perspective in film and its use in video games.[190] The bird's-eye-view in film is much more limited, used for perhaps just a few shots among the entirety of shots used throughout the film, whereas aerial perspective in games is used pretty much throughout the entirety of the game, or at least throughout the majority of the game. In *StarCraft*, gameplay takes place entirely through aerial perspective (specifically isometric perspective), whereas *Pokémon* switches from a top-down aerial perspective for the purpose of navigating the world to the third-person perspective when engaging in turn-based combat, which takes on an entirely different visual mode than overhead navigation.

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[187] "Entwined."

[188] "Video Game Perspective."

[189] Los Angeles-based director and screenwriter SC Lannom describes the overhead shot as follows: "An overhead shot is when the camera is placed directly above the subject. … Overhead shots are also called a bird view, bird's eye view, or elevated shot." Lannom, "The Overhead Shot."

[190] Refer to footnote 354 and connecting material beginning on page 116 for Galloway's explanation of the first-person perspective as it is used in film versus video games. I draw my analogy here from that distinction. See Galloway, "Origins of the First-Person Shooter," 63.

One gameplay advantage of aerial perspective is that much more of the geography or narrative space of the game is visible to the player: "It allows you to see enemies from areas that are not visible on other perspectives, such as an enemy hiding behind a wall or and [*sic*] enemy coming from attacking from [*sic*] behind."[191] Aerial perspective might situate the camera directly above the player's avatar, but a variation, as seen in isometric games, is the situation of the camera at a slight angle over the visual field, which resembles the natural position of a seated player leaning over a chess board.

Isometric perspective, also called 3/4 view, is an axonometric projection, a type of orthographic and parallel projection, a type of linear graphical projection which does not have a vanishing point like perspective projections do.[192] The isometric perspective is sometimes also referred to as 2.5D, giving the impression of having more depth than a flat, 2D image, but not having quite as much depth as a fully 3D game. The isometric perspective is also referred to as non-convergent perspective.[193]

Instead of providing a completely top-down aerial view such as that used in the Atari ST and Commodore 64 game *Xenon* (1988), or another perpendicularly depicted multiview projection—which completely hides one dimension—like the Atari ST game *Gods* (1991), isometric and other axonometric perspective games "reveal the depth of items by looking at the scene from an angle."[194] The isometric perspective creates an illusion of three dimensions through a combination of its fixed high-angle, realistic shading, and realistic depictions of

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[191] "Video Game Perspective."

[192] Jan, "Game developer's guide."

[193] Bell, "Perspective."

[194] Jan, "Game developer's guide."

characters and environment.[195] The angle is visually similar to a high-angle shot used in film, which typically angles the camera on the subject somewhere from or between forty-five degrees and under ninety degrees. In film, a high-angle shot commonly diminishes the subject in some way. In Iranian film director Majid Majidi's *The Color of Paradise* (1999), a high-angle shot is used to emphasize the "dependence and smallness" of the "blind son Mohammad and his elderly grandmother."[196] However, despite this negative connotation, film "interpretations are not exclusive," and this same example could also be read as the subject being watched over by God, "keeping them under protection."[197] In video games, isometric games are typical of both real-time and turn-based strategy games such as the PC massively multiplayer online role-playing game (MMORPG) *Warcraft* (1994) and PlayStation game *Final Fantasy: Tactics* (1997), respectively.

Figure 5. "*Fantasian* (2021), Screenshots No. 1"[198]

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[195] Shimomura, "Can the Beautiful, Beleaguered."

[196] Prunes et al., "Part 3: Cinematography."

[197] Prunes et al., "Part 3: Cinematography."

[198] Nakamura, *Fantasian*. My screenshots using iPad.

In the Apple Arcade JRPG *Fantasian* (2021), the main protagonist Leo navigates towns and dungeons from an overhead angle. Both the height and angle of the camera change depending on Leo's location. Notice how in the image on the left, Leo is seen from a lower angle and height. In the image on the right, the camera sees Leo from further away and from a higher angle. Many RPGs also provide an overhead view when navigating towns and dungeons, but the overhead view is typically the same as the character moves about. They do not have the changes in angle and height used in *Fantasian* as Leo moves to different points of the map. These changes to the camera height and angle are deliberately done in order to showcase more details of *Fantasian*'s unique diorama environments, "real-life miniature sets" by "masters of the Japanese 'Tokusatsu' or special effects industry."[199]
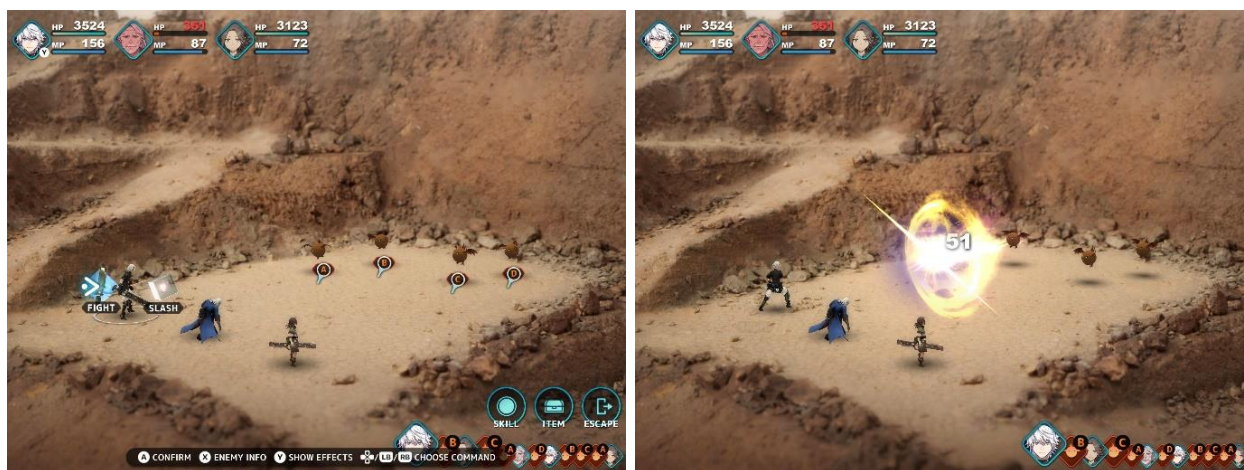

Figure 6. "*Fantasian*, Screenshots No. 2"[200]

While the overhead camera changes height and angle depending on Leo's location when navigating towns and dungeons in *Fantasian*, battles with enemies are, for the most part, shown

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[199] "Diorama."

[200] Nakamura, *Fantasian*. My screenshots using iPad.

from the same fixed, seemingly forty-five-degree high angle. The exception to this rule is some

boss battles that show the battle from a different angle, probably due to the size of the enemy or

to suggest a special significance to the enemy, indicated through the visual emphasis made by the

camera change. This matter-of-fact shot tied to the battle system takes the focus off the spectacle

of the detailed dioramas and instead directs the player toward the tactical experience of the turn-

based battle system. A turn-based battle system can be likened to chess, in which players are

given time to deliberate each move. In a real-time system such as that found in many fighting

games like the multiplatform *Street Fighter V* (2016), players fight on the fly as in a real-life

boxing match. *Fantasian*'s turn-based system contrasts with a real-time system, as represented in

the above image on the left, wherein the player issues Leo and the rest of the party commands

taken in turn with the various enemy combatants.

The above image on the right shows how the player-commanded action, which in this

case is a standard attack on the enemy, plays out. The sword slash does not happen at the press of

the button like in a real-time battle system but instead gives a visual demonstration only a

moment after the command has been issued. The turn then passes to another party member or to

one of the enemy combatants. The row of icons displayed at the bottom-right corner of both of

the above images presents the turn order, which the player uses to strategize the optimum

commands amongst their available options. For example, if a party member is low on health, as

is the case with Zinikr, the middle character in the lineup, and one of the enemies is next in line

to make a move, it would be prudent for the player to issue a command to heal, such as by using

a healing spell or healing item targeting Zinikr, rather than to go on the offensive. Players must

be careful to plan for both the short-term and long-term duration of the fight. In this example, it

may well be possible that Leo has run out of magic points (MP) as a result of using too many

offensive magic spells or having used too many healing spells already, in which case, Leo would

be forced to use healing items or perhaps go on the offensive so as to defeat the enemy before

they have a chance to strike.

While the JRPG genre provides deeply strategic gameplay in terms of both its turn-based

combat systems as well as through deep character customization options related to attribute,

magic, and equipment setups, this strategic genre nonetheless does tend to more heavily

emphasize visual aesthetics than other strategy genres like Western RPGs and real-time isometric

strategy games. I use the term aesthetics here in a loose sense to refer to passive visual

characteristics more common to the experience of enjoying a painting or viewing a film. In

Fantasian and other JRPGs, this aesthetics is exhibited through an emphasis on fantastical,

highly stylized character and environmental designs that are bright and colorful, as well as

character modeling and tropes often influenced by Japanese anime and manga. While a real-time

isometric strategy game like *StarCraft* contains well-modeled and colorful unit designs and map

environments whilst exhibiting a sense of grandness in the spectacle of base building, expansion,

and combat from its commander's view, JRPGs are much more focused on narrative, relying as

much on the exhibition of its environments, lengthy cutscenes, and ambient effects to immerse

the player in its diegesis as they do on fulfilling combat mechanics.[201]

Within the context of the games versus narrative debate, which takes up much of early

games studies discourse, *Fantasian* is a much more ideal candidate for a narrative video game

than *StarCraft*. In its emphasis on aesthetic enjoyment over strategic dominance, the whole

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[201] Galloway, "Gamic Action, Four Moments," 7. Here, Galloway defines diegesis within the context of video games as "the game's total world of narrative action." As Hartley explains, diegesis as a theoretical concept is prevalent in film and literature, going back even to Aristotle, who "used it to describe how literature was a process of *telling* that did not involve *showing* it [emphases both Hartley's]." See Hartley, "Diegesis (Diegetic), Hyperdiegesis," 92-93. The directly quoted words are on page 92.

visual schema of *Fantasian* lends itself less to an ideological expression of domination, expansion, and control than it does to an expression of more wholesome traits and concepts like color, nature, and travel. The real-time play mechanics of *StarCraft* and FPS games like *CS: GO* affirm the qualities of tension, discord, and speed reticent of industrialization across the globe, first materially in the expansion of cityscapes and in global military conflict and, second, digitally through the ongoing ideological international and domestic engagements found on social media and other internet platforms.

Perhaps unsurprisingly, the ascendancy of competitive gaming over gaming driven by narrative and visual aesthetics is generally distinguished categorically as being Western-influenced, which is exemplified in so-called Western RPGs like the multiplatform *Dragon Age: Inquisition* (2014) and the multiplatform *The Witcher 3: Wild Hunt* (2015). In addition to their real-time combat mechanics, Western RPGs are further distinguished from JRPGs through their more realistic character and environment models, which take little to no influence from Japanese anime- and manga-inspired designs; Western RPGs also conventionally feature what are pejoratively called "fetch quests," which inundate players with superficial errands, and with item economization that mirrors the worst of capitalistic excess and waste.[202] Perhaps *The Witcher 3: Wild Hunt* and other more Western-inspired games better reflect the functionalist envisioning of video games underpinning game studies, which coincides with Galloway's notion of video games as "*algorithmic cultural objects* [emphasis the author's]" or "informatic software."[203] Galloway treats games fundamentally as software systems before anything else, even games:

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[202] According to Wiktionary, a "fetch quest" is "[a]n in-game quest (mission) in which an object or objects must be acquired and brought back to the quest-giver or given to some other designated party." The entry notes its "negative connotation … to refer to boring and repetitive quests, and quest design seen as uninspired and low-effort." See "Fetch quest."

[203] Galloway, "Gamic Action, Four Moments," 6.

"the video game *Dope Wars* has more in common with the finance software *Quicken* than it does with traditional games like chess, roulette, or billiards."[204] Indeed, at the heart of Galloway's distinction of video games as a medium separate from photography and film is what he calls the "action-image," extended from philosopher Gilles Deleuze's use of the term as "to describe the expression of force or action in film."[205] Media scholar Nick Oberly explains that Deleuze's action-image is one of three kinds of images Deleuze categorizes and that the action-image in particular "relates to the actions of subjects (name verbs through discourse)."[206] For Galloway, the action-image has migrated to video games "not as a particular historical or formal instance of representation but as the base foundation of an entirely new medium."[207] In short, to interpret Galloway's statement, the action-image is not only one of many types of images but constitutes the whole of the video game medium. This point is among the pivotal support pillars for the conceptualization of video games as a primarily action-based medium, an ontological consideration which Galloway expands upon through his system of gamic action: "In sum," Galloway states, "because of my starting assumption—that video games are not just images or stories or play or games but *actions*—I have outlined a four-part system for understanding action in video games[.]"[208] Galloway further brings up the vital point that computers form the site of

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[204] Galloway, 6.

[205] Galloway, 2.

[206] Oberly, "Annotation." Oberly's annotation is for the following reference: Deleuze, "The Movement Image."

[207] Galloway, "Gamic Action, Four Moments," 2-3.

[208] Galloway, 37.

both work and play, accentuating the extent to which the computer so pervasively arranges daily life.[209]

What I aim to emphasize here is the configurative essence at the heart of most video games. Even the JRPG *Final Fantasy X*, a beloved classic and one of my own favorite video games, which I have no hesitation extolling as a game which far exceeds many Western games in terms of aesthetic visual and narrative quality at the same time that it proves to be a fun game in its own right, is, according to Galloway, fundamentally composed of configurative elements, or what he terms "nondiegetic operator acts" or "acts of configuration."[210] Comparing *Final Fantasy X* to the RTS game *Warcraft III: Reign of Chaos* (2002), Galloway asserts that *Final Fantasy X* is a game in which "confirmation itself *is the very site of gameplay* [emphasis Galloway's]."[211] "In *Final Fantasy X*", Galloway goes on, "the process of configuring various weapons and armor, interacting with the sphere grid, or choosing how the combat will unfold are all executed using interfaces and menus that are not within the diegetic world of the game."[212] Galloway adroitly observes the result of the medium's configurative makeup, that configurative acts "are a rendering of life: the transformation into an information economy in the United States since the birth of video games as a mass medium in the 1970s has precipitated massive upheavals in the lives of individuals submitted to a process of retraining and redeployment into a new economy mediated by machines and other informatic artifacts. … In short, to live today is to

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[209] Galloway, 5. On this page, Galloway states, "[t]he player—the 'operator'—is the one who must engage with this machine. In our day and age, this is the site of fun. It is also the work site."

[210] Galloway, 12.

[211] Galloway, 13.

[212] Galloway, 14.

know how to use menus."[213] From this vantage point, one can easily see the conjoining of work

and play at the computer terminal, a powerful mediation force not only for video games but for

the remediation of other media within a unified and fluid ecosystem of images and other

information at large.

Conveying a related idea, Galloway states that players and games "work together in a

cybernetic relationship."[214] The cybernetics conjoining user and medium reconfigures not only

labor practices and power relations but also molds ideas, influences, and ideologies, not to

mention complicates age-old philosophical questions around consciousness and being,

epistemology, and the like, anticipating once farfetched sci-fi imaginaries and questions that are

not unlike those envisioned in Japanese director Mamoru Oshii's sci-fi dystopia anime *Ghost in*

the Shell (1995).

While I agree with Galloway on the configurative status of video games like *Final*

Fantasy X—certainly, the configurative aspects of the game work in synthesis with its visual and

narrative attributes to create something wholly distinct from, say, an anime or visual novel

adaptation—, I maintain that it is not the configurative aspects at the level of running software

which fundamentally define the gameplay experience. At a semiotic level, it is the output of this

configuration in visual form in synthesis with every sensorial layer experienced by the player,

extending even to the living environment of surrounding texts (box art, promotional materials,

strategy guides, etc.), which constitute the meaning of the work. My divergent take on this

ontological matter is perhaps more a matter of degree than anything else. Configuration can be

rooted all the way down to the very lines of software code, but there it is too discrete and

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[213] Galloway, 16-17.

[214] Galloway, 5.

systematic. The stepwise if/then procedures of software do not satisfactorily line up with the

more fluid sensations of gameplay at the user level. A synthetic interpretation at the level of the

information available on the screen, read in conjunction with the subjective mind of the player or

critic, makes possible the fluidity of interpretation within complex and ever-changing networks

charged by unstable meaning, the nodes of which are unstable and unable to be adequately

understood in isolation. Thus, computer software applications like *Quicken* are truly rooted in

configuration and more adequately conceptualized to a greater degree by their underlying

software than are games, which may be highly configurative but are still more complexly rooted

in a visual semiotics if not also to some degree in narrative and other aspects.

Like *Final Fantasy X*, *Fantasian* contains many configurative acts, from its menu-driven,

turn-based battle system to equipping gear onto various characters.[215] Yet its stats, skill, and

ability progression system is much more straightforward than in *Final Fantasy X*. *Final Fantasy*

X uses what is called a sphere grid system, a menu system for each character that allows the

player to customize the stats, skills, and abilities of each character. Galloway even includes the

sphere grid as among the key configurative elements of *Final Fantasy X*'s gameplay.[216] In

addition to a comparatively uncomplicated skill and ability upgrade system, what further

distinguishes *Fantasian* from *Final Fantasy X* is its deliberately underemphasized combat. These

two elements move *Fantasian* further toward what Galloway terms "diegetic machine acts."[217]

Rather than allowing the player to engage with configurative elements outside of the narrative

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[215] Galloway, 14. On this page, Galloway includes the configuration of "weapons and armor … [and] choosing how the combat will unfold" as key configurative elements in *Final Fantasy X*, particularly as they utilize "interfaces and menus that are not within the diegetic world of the game." For Galloway, "[t]hese acts of configuration are often the very essence of the operator's experience of gameplay—simply proof that gaming may, even for limited moments, eschew the diegetic completely."

[216] Galloway, 14.

[217] Galloway, 17.

game world, diegetic machine acts form an inverse relationship: the machine acts within the

narrative game world. Galloway provides the Dreamcast action-adventure game *Shenmue* (1999)

as an example here as one of any game that relies on "ambience, of nonplay" as an integral part

of the player's experience with the game.[218]

> Of the ambience act, Galloway gives the following description:

> When games like *Shenmue* are left alone, they often settle into a moment of
> equilibrium. Not a tape loop, or a skipped groove, but a state of rest. The game is slowly
> walking in place, shifting from side to side and back again to the center. It is running,
> playing itself, perhaps. The game is in an ambient state, an *ambience act* [emphasis
> Galloway's].[219]

Galloway points out that an important aspect of the ambience state is that the aspects of the game

carrying on a life of its own will not change the game state for the player. "The sun goes down,

then it comes up. Trees stir. These acts are a type of perpetual happening, a living tableau,"

Galloway goes on.[220] Of critical note is Galloway's characterization of the ambience act as "a

privileging of the quotidian, the simple," drawing comparison to the importance of time as

represented in Japanese director Yasujiro Ozu's films.[221] This comparison is a fitting one in light

of my assertion that foregrounding the ambience act subverts the predominant mode of Western

gaming, which tends to underscore the illusion of domination and control on the part of the

player through agency and configuration. As film scholar James Monaco puts it, "Ozu

contemplated locales and seasons with a very un-Western sensitivity and tranquility, whereas the

films of Kurosawa are much more easily understood by Westerners."[222]

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[218] Galloway, 18.

[219] Galloway, 10.

[220] Galloway, 10.

[221] Galloway, 9-10. See, for example, Ozu's *Tokyo Story* (1953).

[222] Monaco, "'Cinema': Esthetics," 343.

For me, the ambience act represents the clearest good that could be conceivably brought about by video games, allowing the player to escape from the modern world not through gratuitous violence, cinematic spectacle, or novel competitive arenas but through the mimesis of the timeless constants found in nature. The multiplatform space adventure and exploration game *No Man's Sky* (2016) represents in parts the apotheosis of this ideal. However, its fullest realization is perhaps limited as much as it is enabled by its own configurative base. Upon release, the game was steeped in innumerable technical problems that got in the way of its ultimate vision, although many of its technical problems have been fixed over time through patches, or software updates delivered by the design team.[223] The multiplatform Western RPG *The Elder Scrolls V: Skyrim* (2011) is also a prime example of a video game that utilizes the ambience act to great effect. Immersion in *Skyrim* depends heavily on environmental exploration, so the player's surrounding environment is filled with various monsters, vegetation, weather, and nonpayer characters (NPCs) who tend to the game world with lives seemingly their own.

The ambience act is, at least on the part of the player, mainly dependent upon the visual signification of a living, breathing environment, even if, as Galloway suggests, the underlying software continues "in a state of pure process," and thus suggests the act is also heavily dependent on the procedures of the machine.[224] Sound plays an important role in the ambience act as well which, for Murray, can greatly enhance a game's narrative immersion; Murray gives as an example Cyan's multiplatform puzzle adventure game *Myst* (1993):

> "*Myst* (1993) achieves much of its immersive power through its sophisticated sound design. Each of the different areas of the game is characterized by distinctive ambient sounds, like the whistling of wind through the trees or the lapping of waves on the shore, that reinforce the reality of fantasy worlds, which are really just a succession of still

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[223] For more on iterative improvements to *No Man's Sky* since its release, see Creswell, "No Man's Sky at 5."

[224] Galloway, 10.

images[.] … The music shapes my experience into a dramatic scene, turning the act of discovery into a moment of dramatic revelation."[225]

I appreciate Murray's attention to the subjective play experience brought about by the layered signifiers of sound, image, and user action. Note the lack of emphasis in the proceduralist design of the game: "the music track works as a game technique: it provides a clue that I am mouse-clicking along in the right direction… But it is not gamelike in tone."[226] An important distinction is embedded here, which I will expand upon in the next chapter, regarding the gap between the production of a work and its consumption. While *Myst* is constructed with code, and its running software and accompanying hardware components are essential to its makeup, the player experiences the work from a totally different vantage point than that of the developer. In *Myst*, the procedural element of mouse clicking through a succession of still images is subservient to Murray's "feeling of having come in immediate contact with a terrible act of depravity."[227] I think it comes as no surprise that many games that exhibit rich ambient environments, such as those found throughout the *Myst* series, do so through strong soundscapes as well as visually evocative environments. *Fantasian* is aided in sound by the distinctive game melodies of *Final Fantasy* series staple Nobuo Uematsu. Additionally, *Skyrim*'s soundtrack by Jeremy Soule includes an over forty-minute ambient soundscape representative of Skyrim's game world, entitled "Skyrim Atmospheres."[228] Sound, visuals, and narrative are all aspects of a video game that breathe life into the work beyond its gameplay mechanics. Many players enjoy extending the

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[225] Murray, "Harbingers of the Holodeck," 53, quoted in Berger, "Janet Murray: *Hamlet on the Holodeck*," 69.

[226] Murray, "Harbingers of the Holodeck," 53, quoted in Berger, 69.

[227] Murray, 53, quoted in Berger, 69.

[228] "The Elder Scrolls V: Skyrim Official Soundtrack."

ambience of a video game through various connected forms, including officially licensed novels and short stories, soundtracks, posters, art prints, unofficial fan fiction, memes, and the like.

As is discussed further in the closing chapter of this dissertation, many video games actively emphasize narrative or aesthetic immersion as key aspects of their expression, going so far as to deliberately eschew conventional gameplay, accentuating the ambience act at the cost of configurative acts as well as the types of expressive action more typically thought of as being most pertinent to video games, what Galloway terms the "*diegetic operator act* [emphasis the author's]," or "direct operator action inside the imaginary world of gameplay."[229] The two primary examples of diegetic operator acts Galloway gives are what he terms "move acts" and "expressive acts:" These acts involve the movement of the character throughout the game world and character actions that occur within the game world, such as clicking to fire a weapon, respectively.[230] Traditionally, these acts are considered important as distinguishing characteristics of video games. Certainly, the popular conception of video games envisions them as media with high degrees of activity on the part of the player, particularly in fast-paced twitch reflex games currently popular in e-sports. Berger alludes to this fact, stating, "[i]n video games we are more active and this provides what [Murray] calls 'agency,' a feeling of satisfaction gained from taking action and seeing the results – in the game – of our decisions and actions."[231] Berger goes on that, for Murray, video games navigate two distinct ends: on one end, for Murray, there is the "pleasure players get from the narrative elements of the game and the other is the pleasure they get from the game-playing, problem-solving, and contest-winning elements of the

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[229] Galloway, "Gamic Action, Four Moments," 22.

[230] Galloway, 22-24.

[231] Berger, "Janet Murray: *Hamlet on the Holodeck*," 70. See Murray, *Hamlet on the Holodeck*.

game."[232] It is important to recognize that video games do not often reside at the extreme ends of the spectrum between more gameplay-oriented titles and more narrative- and ambience-driven works. *Fantasian*, for example, is quite traditional in many respects to many JRPG games, which harken back to the 1980s.[233] It should also be noted that JRPGs often contain a mix of various other cultural influences that are not outright explicit. For instance, Semitist Ola Wikander has outlined the influence of Jewish mysticism in Japanese games of the 1990s and early 2000s.[234]

If a moral scheme can be theorized in the visual schemata of video games, the Mistwalker team provides some guidance in *Fantasian*'s groundbreaking mechanics called "the 'Dimengeon Battle' mechanic, which allows players to send previously encountered enemies into a separate dimensional dungeon to streamline combat and maximize uninterrupted exploration of the beautiful locations."[235] This mechanic explicitly highlights JRPG sensibilities of beauty and exploration to the point of removing combat altogether for significant periods. In terms of Galloway's action-image, these sensibilities are much more akin to those exhibited by the haikus of the Japanese poets Basho, Buson, and Issa than to the sensibilities of many Western-derived games, which bear more resemblance to a military training simulation than painting or poetry.[236] The PC military shooter game *ARMA 3* (2013) is indicative of this latter engagement, which would skew far more heavily toward the game end of the game/narrative spectrum.

The isometric perspective is typical in many strategy games and, while technically convenient and often aesthetically pleasant, should also be adequately contextualized in terms of

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[232] Berger, 70. See Murray, *Hamlet on the Holodeck*.

[233] Byrd, "Was Final Fantasy."

[234] Wikander, "The God in the Machine," 238-39.

[235] "Diorama."

[236] For an excellent survey of the haiku poetry of Basho, Buson, and Issa, see Hass, *The Essential Haiku*.

its ideological history and present use. The use of isometric perspective in video games emerged

during the 1980s and 1990s out of the need to represent 3D during a time when technology was

not capable of 3D modeling.[237] To realistically depict characters and environments, developers

use visual cues to suggest changes in elevation as well as to render characters and environments

from every angle, allowing the player to switch the camera angle and realize the depth of the

scene.[238] At the same time, since the levels of isometric games consist of limited space where the

chessboard-like grids come to an end, a higher focus of visual detail can be included in a smaller

space.[239] Prominent isometric games include *Fire Emblem: Shadow Dragon and the Blade of*

Light (1990), *Tactics Ogre: Let Us Cling Together* (1998), *Final Fantasy Tactics* (1998), *Jeanne*

D'Arc (2007), *StarCraft*, *League of Legends* (LoL) (2009), and *Pillars of Eternity* (2015).

Interestingly, while technology is capable of more realistic 3D modeling in today's day and age,

use of the isometric perspective has become so conventional as to warrant continued use, and it

will likely remain a popular vantage point for games going forward.

While isometric games do not technically use linear perspective in the vein of

perspectival painting and perspective projection video games, the ladder of which include FPS

games that utilize vanishing points, they are important nonetheless, even if secondarily, for

having some semblance of depth necessary for player immersion in a tactical experience. This

particular viewpoint embeds the player in a control- and domination-oriented experience as

paralleled in daily life by administrative and military planning as it is in the seemingly prosaic

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[237] Shimomura, "Can the Beautiful, Beleaguered."

[238] Shimomura, "Can the Beautiful, Beleaguered."

[239] Shimomura, "Can the Beautiful, Beleaguered."

activities of chess playing, table-top board games, and sports-stadium spectacles which harken back to the Roman days of coliseum entertainments.

Both isometric games and the high-angle shot in film are expressions of an already conventionally coded mode of sight replicated in numerous daily activities and conventionalized throughout history. High-angle viewing, which embodies connotations of power and control, equates the perspective of a player's engrossment in winning a board game, the arena view of gladiatorial combat, stadium sports, and the general's sight of command over the battlefield, that of the hot-air balloon spotter as much as it is that of the isometric gamer. The view taken up in isometric games is one of greater distance and, thus, greater relative safety than that connoted in the first-person perspective. In terms of gameplay aesthetics, a comparison can be made between soldiers embedded in front-line combat and the commander moving pieces across a tactical map in the command room. An isometric game such as the PlayStation strategy game *Tactics Ogre* represents war as an abstraction, a battle of tactical wits and resource management, as opposed to the FPS game *Doom*, which represents a battle of twitch reflexes and rapid movement in the chaos of real-time combat at a much more localized level.

That the isometric perspective conventionally depicts war games and strategy games is unsurprising given the perspective's history, which, like linear perspective, originates in visual art. In visual art, isometric perspective developed during the sixteenth century, when types of technical drawing were needed to design architectural plans, particularly for fortification.[240] Isometric perspective is "[t]he most fully developed type [of technical drawing] … in which the relative height, depth and width of the forms remain constant throughout the depiction, allowing

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[240] Bell, "Perspective."

precise scale measurements to be taken."[241] Among the earliest examples of fortification

drawings that use isometric perspective include Wilhelm Dilich's portrayal of city gate ramparts

in the *Peribologia* (1640).[242] Other architectural examples can be found in technical drawings,

for instance, in the "Structural framework of a Chinese timber hall, Ming to Qing period, 1368-

1911; technical drawing."[243] Visual art which utilizes isometric perspective includes British artist

Rita Donagh's *Long Meadow* (1982)[244] and Swiss artist Sandro del Prete's *Folded Chessboard*

(1975).[245] The fact that isometric video games such as *StarCraft* and the *Civilization* series

(1991-2015) are focused on fortification, building, expansion, and economization should come as

no surprise given the origination of isometric perspective in visual art as a method for designing

fortification structures.

Isometric games for mobile phones are often freemium games that are highly monetized,

which may well represent an evolution of isometric perspective, once used for the purpose of

territorial war between factions and now used for ideological assault on consumers. Freemium

games are games that are free to download and play but which "require money to unlock certain

features."[246] Without paying, players typically face an uphill battle to advance through levels,

become stronger, and compete effectively against other players. Unlike standard games that are

typically bought outright for a fixed price, freemium games allow players to continuously

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[241] Bell, "Perspective."

[242] Coulson et al., "Military architecture and fortification." An updated version of this Grove entry can be found by way of Champion et al., "Military architecture and fortification."

[243] "Structural framework."

[244] Donagh, "Long Meadow."

[245] Dean, "Megafon's Folded Chessboard."

[246] Ho, "What Are Freemium Games?"

purchase upgrades to their experience in an unending fashion. Thus, these quote-on-quote free games prove to be lucrative money machines. As of 2018, the mobile isometric strategy game *Mobile Strike* (2015) grossed approximately 1.3 billion dollars, earning around fifty-five percent of total revenue from the United States.[247]

Finally, 2D perspective provides a side view of the character's avatar moving from left to right whilst overcoming obstacles along the way.[248] This perspective provides a sense of depth via an interactive foreground situated by a distant and non-interactive background, in which objects are sized smaller in relation to the foreground characters and objects. While the sense of depth makes use of the tradition of perspectival rendering found in visual art, and the detailed environments probably find some influence in landscape painting, the 2D visuals overall seem to rely less on perspective to situate the player in space than first-person, third-person, and aerial perspective games. 2D scrolling games rather derive their expression more purely from gameplay, especially movement through their challenge-ridden stages, which is commonly known as platforming, although platforming is also found in 3D games. Thus, it might be suggested that 2D perspective is less ideological than others and also more aligned with the ambience act in this regard, although more work can be done in this area to interrogate this claim.

I applied visual studies in this chapter by blurring distinctions between video games and painting. I specifically examined linear perspective, and perspective as a whole, as a common thread prevalent to visual culture at large. In concluding this chapter, I find a key takeaway to be that visual conventions shared between media can be identified and analyzed through a broad

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[247] Yeh. "Mobile Strike Revenue."

[248] "Video Game Perspective."

historical contextualizing in order to develop intersectional critiques that might otherwise be left

unaddressed.

Chapter 3: Apparatus Theory and Game Studies

The common use of linear perspective in both painting and video games reveals important similarities between the two media and underscores the importance of the realistic depiction of depth as a privileged entity in Western media. In the previous chapter, I explained how linear perspective is not only a common aesthetic in both painting and video games but also is ideologically instructive to the viewer. Film is also useful to compare to video games because of how it exposes the larger ideological apparatus at work through the relationship between film production and consumption. In general, and explained at length throughout film theorist Jean-Louis Baudry's "Ideological Effects of the Basic Cinematographic Apparatus" (1974-75), apparatus theory, which is prevalent in film studies, outlines how the complexity of a medium's technological base forms the crux of ideological expression in film.[249] This theory extends to other complex media and is fitting for game studies because, in my view, the material foundation of the computer medium is arguably more complex than that of film, thus creating an even wider divide between the consumption of video games and their creation. Thus, I argue that the apparatus is modified and expanded in video games.

Baudry formulated the basis for apparatus theory in 1970, not long after French New Wave and other avant-garde filmmakers were creating films subverting the longstanding traditional conventions of Hollywood cinema. Informed by psychoanalysis, Marxism, and semiotics, apparatus theory is an approach that emphasizes film as ideology, based upon the underlying machinery of film in conjunction with the supposed reality it expresses.[250] Importantly, Baudry suggests that the historical development of linear perspective places its

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[249] Baudry, "Ideological Effects."

[250] Wilson, "What Is the Apparatus."

ideological origins in painting and extends it through film.[251] Apparatus theory also affirms the

relationship between the cinema and audience.[252] This relationship is aptly characterized as

follows:

> Apparatus theory conveys the relevance of technical equipment and machinery in order to
> capture not only the mode and emotions of a movie character, the aspects of a landscape,
> the expressions of the glaring lights, the loud silence of a lone eerie darkroom, or the
> scenes depicted from the movie and film scripts, but also to encapsulate the fantasies and
> sentiments of the moviegoers themselves[,] thus strengthening further the already tight
> proverbial bond and relationship of the movie spectators to cinemas through the bridges
> of the powerhouse movie camera lenses.[253]

Baudry contends that film derives its ideological expression, or "ideological surplus value," by

way of the concealment of its technical base, or its "instruments."[254] Most films tend not to

provide a knowledge effect: The fact that the complex machinations producing the image are

hidden from many films suggests that what audiences ultimately view is illusionary, though the

film's psychological realism may be powerful enough to influence the viewer's ideas or actions

outside of a film. By contrast, Baudry suggests that making manifest a work's "inscription," or

its production, produces a knowledge effect "as denunciation of ideology, and as a critique of

idealism."[255] This knowledge effect is what avant-garde director Jean-Luc Godard and other

French New Wave filmmakers produce in self-reflexive films, which David Parkinson describes

as a genre of cinema which emphasizes "its visual and psychological purpose."[256] Parkinson

further explains that "[t]he structural film is often bracketed with the reflexive genre, on account

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[251] Baudry, "Ideological Effects," 40.

[252] "Apparatus Theory."

[253] "Apparatus Theory."

[254] Baudry, "Ideological Effects," 41.

[255] Baudry, 41.

[256] Parkinson, "New Inspirations 1959-70," 199.

of its rejection of the illusionist elements of cinema and its emphasis on film as material."[257]

Some well-known self-reflexive films include Stan Brakhage's *Dog Star Man* (1961-1964) and

Mothlight (1963), as well as George Landow's *Film in Which There Appear Sprocket Holes,*

Edge Lettering, Dirt Particles, Etc. (1966).[258]

Since Baudry draws from the French Marxist philosopher Louis Althusser,[259] it is worth

briefly noting Althusser's conceptualization of ideological state apparatuses: Althusser

distinguishes between repressive state apparatuses (RSAs) and institutional state apparatuses

(ISAs). The former involves forces falling under state control (army, government, etc.), whereas

the latter involves social institutions (education, family, culture, etc.).[260] Both video games and

film typically fall under the category of ISAs, although film has notably been controlled by

various governments throughout history, as in the many German propaganda films during World

War II and in Soviet cinema under Lenin's rule, and there is at least one instance of a

government-sponsored video game with the multiplatform military shooter *America's Army*

(2002), which was sponsored by the U.S. Army before it shut down in 2022.[261]

Before expanding on the knowledge effect discussed within apparatus theory and

examining it in connection with video games, I first want to note its roots in linear perspective.

Since the inception of linear perspective, which emerged coequally with the modern conception

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[257] Parkinson, 200.

[258] Parkinson, 200.

[259] Baudry, "Ideological Effects," 40-41. Baudry states on these pages, "The question becomes, is the work made evident, does consumption of the product bring about a 'knowledge effect' [Althusser], or is the work concealed?" The brackets are the author's. For more on Althusser, particularly in reference to Althusser's "knowledge effect," see Goldstein, "Althusserian Theory: From Scientific Truth," 4-5. For more on Althusser, see Althusser and Balibar, *Reading Capital* and Althusser, *Essays in Self-Criticism*.

[260] Hartley, "Ideological State Apparatuses," 131.

[261] Chalk, "America's Army is finally closing."

of science, art's progression has been associated with being increasingly lifelike. In the same way, video game graphics have followed the same trajectory toward increasingly lifelike representation in the FPS and third-person shooter genres. This development is best exemplified in big-budget, triple-A launch titles, which parallel the technological privileging and commercial influence of blockbuster movies. When a new game system launches, a variety of games are released to showcase the system's upgraded features. Almost always, these features include upgraded graphics. Typically, FPS or third-person shooter games lead the charge in showcasing just how much more realistic the system's graphics are capable of being. Such showcase titles have included, for example, *Call of Duty 3* (2006) and *Resistance: Fall of Man* (2006) for the PlayStation 3, *Killzone: Shadow Fall* (2013) and *Battlefield 4* (2013) for the PlayStation 4, and, more recently, *Call of Duty: Black Ops Cold War* (2021) and *Watch Dogs Legion* (2021). With few exceptions, 2D platformers, fighting games, and JRPGs, among other game genres, rely on fantastical, highly stylized graphical styles, while FPS and third-person shooter games tend to aim for more realistic graphics.

The conventions of realism set forth in video games and film are not natural occurrences but instead follow the ideological myths of visual culture since the inception of linear perspective, which takes for granted vision as shaped by the optics of the human eye as universal truth. This idea of art conjoined with science through perspective is dutifully summed up by Brener in the following quote from the final chapter of *Vanishing Points* (2004):

> Perhaps there is an even deeper vanishing points, one where art meets science. Perhaps these two human endeavors that seem so firmly separate on most levels do in fact meet on some deeper one. It would be that point where there comes together the unshakable belief of both scientists and artists in the unity of nature and the interrelatedness of its parts.[262]

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[262] Brener, "The Final Vanishing Points," 198.

For Brener, the development of perspective in art may be a symptom of a larger, universal harmony between art and science where artistic value is given merit by its compatibility with universal laws revealed objectively by science, and perspective is the latchkey that opens a door once dividing the two fields and now opening them into each other. This theory is problematic because, while perspective in art may derive from mathematics and the physiology of human vision, it could lead to the viewpoint that perspectival art is objectively superior to other forms of art, including non-perspectival, multi-perspectival styles like cubism as well as art derived from other forms of perspective, such as through anamorphis. Furthermore, the histories of science and art have not necessarily been clean-cut narratives of progression.

The predominance of science in contemporary culture stems from the Enlightenment movement beginning in the eighteenth century throughout North America and Europe.[263] Enlightenment thinkers privileged notions of progress and the predominance of reason, especially through the belief that "through the acquisition of knowledge and the application of reason, social, intellectual and moral reforms could be effected."[264] Prominent Enlightenment thinkers include the eighteenth-century philosophers Voltaire, Jean-Jacque Rousseau, and David Hume.[265] Implicit in Enlightenment reason is the belief that science and reason naturally lead to "certain and universal truths" and can "demystify and illuminate the world over and against religion, myth and superstition."[266] The predilection for linear perspective over alternative forms of perspective and non-perspectival art during the Renaissance anticipated Enlightenment thought, which further cemented the implied value of perspectival art to the present day. Indeed,

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[263] Mainz, "Enlightenment, the."

[264] Mainz, "Enlightenment, the."

[265] Barker, "Enter Postmodernism," 192.

[266] Barker, 192.

"[f]or Enlightenment thinkers, human creativity, rationality and scientific exploration mark the break with tradition that modernity heralds."[267] However, not only does it seem that Enlightenment thought consolidated the taken-for-granted nature of scientific thinking, which continues to recent times, it also seems to have cohered with the industrialization of society as a whole, ushering in new forms of class division and hierarchical institutions of power.

Taylorism is one prominent example of the predominant mode of thinking that has structured industrial society. Favoring science to an extreme, American engineer F. W. Taylor claimed in his book *Principles of Scientific Management* (1911) that production was organized most efficiently through rational work divisions, such as organized labor divisions, allowing for the "separation of tasks and functions," as well as "the use of time and motion studies to measure and describe work tasks," "the prescription of tasks to workers in minute degrees," "the use of incentive schemes and money as motivation," and "the importance of management in planning and control."[268] Taylorism manifested in twentieth-century labor practices, particularly "in the standardization and mechanization of factory assembly lines," as exemplified by Ford in its earliest days.[269] Taylorism has since pervaded multiple sectors of modern life; the approach is not only utilized in the factory but also throughout "service industries, educational systems, state administration and even mass party politics."[270]

Many aspects of video games are symptomatic of Taylorism. Gameplay might be most appropriately characterized by such qualities as the responsiveness of controls and the granular degrees of interactivity between player and game. Points are scored precisely and accurately,

[267] Barker, 192.

[268] Barker, 193. See Taylor, *The Principles of Scientific Management*.

[269] Barker, 193.

[270] Barker, 193.

complex control schemes are expected to carry out actions without lag and within very narrow frame windows, and a plethora of achievements and rewards incentivize player participation. Both 3D and 2D fighting games like *Street Fighter V* feature rosters of characters with diverse move sets. A variety of punches, kicks, throws, and special moves are characterized by frame data, which means that each move has a set amount of time, often microseconds, that define attributes like how long a move is animated, its range of collision, the range at which it can be blocked, when it can be countered, and so on. In competitive fighting games, players must understand character frame data in detail in order to respond correctly to a range of attacks available to their opponent. These games have quite a high skill ceiling, enough that monetary motivation is increasingly a factor in competitive gaming with the advent of cash prizes for tournament winners. Players can even compete for scholarship money in the fast-spreading area of e-sports.[271] While these opportunities can be beneficial for those with the talents and time to devote to this popular category of games, the popularity of e-sports also entrenches this aspect of gaming over the ambience act and narrative.

According to cultural studies scholar Chris Barker, Marxist writer Harry Braverman criticizes Taylorism in his book *Labor and Monopoly Capitalism* (1974) as what Barker characterizes as "an ideology of management and control."[272] For Barker, Taylorism reveals the harmful side of Enlightenment thinking, wherein science is utilized "in the service of the regulation, control and domination of human beings."[273] Barker further explains that Taylorism is equated with what German philosopher Jürgen Habermas "calls the 'instrumental rationality'

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[271] Podlaski, "Liberty students benefiting."

[272] Barker, 193. See Braverman, *Labor and Monopoly Capitalism*.

[273] Barker, 193.

underpinning domination."[274] Indeed, since the proliferation of science as a means of regulation

and control throughout the twentieth century, this criticism has been taken up by a slew of

philosophers and cultural critics. German philosophers Theodor Adorno and Max Horkheimer

asserted in their *Dialectic of Enlightenment* (1979) that Enlightenment thinking equates

essentially to, as Barker puts it, "a logic of domination and oppression."[275] As Barker explains,

expounding on Adorno and Horkheimer's argument, "[t]he very impulse to control nature

through science and rationality is … an impulse to control and dominate."[276] FPS and strategy

war games reveal this same impulse. These genres remain among the most popular since their

very beginnings and are grounded in highly active and combative competitive play, which

necessitates great skill and requires the domination of other players or the environment itself as

victory conditions.

Art and science are both convoluted and contested ideas. Histories of both science and art

are multi-stranded, interwoven, and combative, with no single universal story asserting a telos, or

pre-destined endpoint, toward which knowledge and practice progress.[277] In opposition to the

Enlightenment notion envisioning science and rationality as a natural progress toward societal

betterment, French philosopher and historian Michel Foucault argues that the discourse involving

the transition of subsequent historical eras as "*discontinuous* [emphasis the author's]."[278] That is,

discourse for Foucault, as Barker explains, "is marked by historical breaks in understanding,

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[274] Barker, 193. See Habermas, *Knowledge and Human Interests*.

[275] Barker, 195. See Adorno and Horkheimer, *Dialectic of Enlightenment*.

[276] Barker, 195.

[277] According to ancient Greek philosophy scholar Tad Brennan, "*Telos* is the ancient Greek term for an end, fulfilment, completion, goal or aim; it is the source of the modern word 'teleology.'" See Brennan, "Telos."

[278] Barker, 196. See Foucault, *The Archaeology of Knowledge* and Foucault, *The Birth of the Clinic*.

changes in the way objects are conceptualized and understood."[279] Barker explains that, for

Foucault, historical periods do not follow a natural, universal progression but instead "are

marked by different *epistemes* [emphasis the author's], or configurations of knowledge, that

shape the social practice and social order of particular historical periods."[280] Foucault's work not

only reconsiders the conceptualization of historical periods as social configurations but also the

subjects formed from said configurations: "Foucault's genealogical studies … concentrate on the

formation and use of knowledge, including the construction of the subject as an 'effect' of

discourse."[281] Foucault argues that the epistemes which define culture from modernity onward

"involve relations of power/knowledge whereby knowledge is a form of power implicated in the

production of subjectivity."[282] This assertion carries major implications for criticism as a whole:

Foucault states, "criticism is no longer going to be practised in the search for formal structures

with universal value, but rather as a historical investigation into the events that led us to

constitute ourselves and to recognize ourselves as subjects of what we are doing, thinking,

saying."[283] Thus, while the preponderance of painting derived from linear perspective became a

privileged form of representation from the Renaissance to the present day, it has not done so out

of a universal teleology in which representational forms progress through increased realism but

rather out of an epistemological preference for the imitation of nature.

  While one may like or dislike a picture for any number of multifaceted factors working

together to create an impression upon the viewer, to suggest that perspective alone mirrors some

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[279] Barker, 196.

[280] Barker, 196.

[281] Barker, 197. See Foucault, *Power/Knowledge* and Foucault, "Nietzsche, Genealogy, History."

[282] Barker, 197.

[283] Foucault, "On the Genealogy of Ethics," 45-46, quoted in Barker, 197.

universal driver behind the inner physics of the universe is a highly selective interpretation biased toward perspectival art. What truly combines art and science is their own fluidity as concepts, their own susceptibility to be persistently undone and then reformulated against competing narratives and new interpretations.

In some ways, video games have actually challenged the dominance of linear perspective by enabling works that utilize other forms of perspective entirely, but these works operate at the periphery of the medium. The epistemology framing modern society further encourages video games as a natural progression of representation through the association of computers with the implied truthfulness of science. When considering the capabilities of computers, the complexity of how they operate, society's reliance on them, and the public's general lack of technical understanding regarding how exactly they work, they are essentially real-life forms of magic going unquestioned. Understanding how computers operate at the granular level of physics requires specialized and highly technical forms of knowledge shown through a number of levels of certification or degrees. That they simply do function and allow the user to conduct so many tasks because of some combination of technical phenomena working in conjunction is simply taken for granted. A user experiences using a computer and is convinced of their reality through surface-level operation; the user does not need to understand the complexities coming together to believe their surface-level experience. Describing a computer to someone in Florence during the Renaissance would almost certainly inspire disbelief. Yet things associated with science as well as its unquestioned march of progress are readily accepted by many. Barker explains that, according to American philosopher Gary Gutting, one characteristic that helps make science "a privileged form of knowledge" is its "predictive success."[284]

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[284] Barker, "Biology, The Body and Culture," 115. See Gutting, *Pragmatic Liberalism*.

I think Brener's take on perspectival art is one example of a generally positive inclination toward such art as well as an ever-increasing leaning toward science among scholars, artists, and audiences since the beginnings of linear perspective in the Renaissance. The same bias is evident in the public's fervor around ever-increasing graphical realism and the taken-for-granted notion that more realistic graphics will ipso facto ensure progress in step with the progress of a global techno-industrial society as a whole. This discourse is implied in the language of video game journalism and marketing as well as in skyrocketing financial investments in hardware companies associated with the production of high-end gaming hardware. The tacit value judgments with respect to ever-increasing realism in video game graphics are doubly reinforced not only by the use of linear perspective in video games but also by an unvoiced surrender to anything remotely tied to science.

Many aspects of a painting rely on assumptions made unquestionably by the viewer: These aspects might include the meanings of various objects and overt symbols, moods evoked by certain colors, the balance of color and proportion, and even perspective. Since the widespread use of perspective during the Renaissance, perspective has generally been taken for granted, at least in European and American art, notwithstanding the twentieth-century avant-garde movements.[285]

Similarly, realistic graphics and freedom of movement have come to coincide with what is seemingly considered the natural course of the video game medium. As video game scholar Laurie Taylor asserts, "descriptions of the optical space of video games presume an uncomplicated optical scheme."[286] Just as one might view a perspectival painting as an

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[285] Bell, "Perspective."

[286] Taylor, "When Seams Fall Apart."

uncomplicated representation of reality as the human eye sees it, so accustomed is the viewing

subject to taking for granted linear perspective as an accurate representation of reality, just so

does a player move and see within the experience of a video game and consider it a perfect

simulation of reality. Yet, beneath the surface, impressions of any expressive work are

complexly woven physical materials and ideological signs at work, not natural but artificial and

highly conventionalized forms of expression developed through a long history of usage by

dominant persons and institutions. Video games and paintings alike are representative of social

configurations defining conventional experience, and their audiences are subjects formed from

those configurations.

Video game optics are complicated indeed, perhaps even more so than the already

complicated perspective techniques found in painting. Even in its earlier days, perspective in

painting was no simple tool for depicting space in imitation of human vision. Art history scholar

Margaret Iverson provides a succinct overview of perspective's symbolic function in her article

"The Discourse of Perspective in the Twentieth Century" (2005):

> For Panofsky, Renaissance single-point perspective … anticipates Descartes's
> rationalized conception of space as infinite extension and Kant's Copernican revolution
> in epistemology. The latter implies, as Michael Podro has argued, that Panofsky regards
> perspective as the advent of a reflexive self-awareness about the relation of mind to
> things and about the nature of art as being essentially about that relation, rather than, say,
> the imitation of some supposedly preexisting reality.[287]

Thus, far from dismissing perspective as a mere technical tool, art historian Erwin Panofsky

brings out the cultural symbolism and artistic reflexivity enabled by perspective.[288]

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[287] Iverson, "The Discourse of Perspective," 194. See Podro, *The Critical Historians of Art*. Iverson cites page 189 in her footnote referencing Podro.

[288] See Panofsky, *Perspective as Symbolic Form*.

Elkins provides a useful dichotomy for distinguishing between linear perspective as a mere imitative tool and linear perspective as an interpretative tool, situating metaphorical perspective opposite "meaningless" perspective: metaphorical perspective "does not appear next to an equation or in a complicated graphic. It is … the one that describes how we view the world and constitute ourselves as viewing subjects."[289]

Metaphorical perspective forms the crux of ideological critique in painting and film, and it should be extended to the visual analysis of video games. French philosopher and literary theorist Roland Barthes characterizes ideology in the following manner in his seminal work of cultural criticism *Mythologies* (1972): "Semiology has taught us that myth has the task of giving an historical intention a natural justification, and making contingency appear eternal. Now this process is exactly that of bourgeois ideology."[290] Indeed, in the preface to his work, Barthes describes his work as a critique of contemporaneous French mass culture.[291] A helpful video on Barthes' approach, which I often utilized in my film course, explains how Barthes felt that mass culture provided modern myths as guiding yarns of society once formed in the past by ancient epics and fables.[292] For Barthes, these contemporary myths are ideological in that their meaning is often taken for granted as natural when they are in fact historically-coded sign systems, as he explains in the preface to the 1957 edition of *Mythologies* (2013):

> The starting point of these reflections was usually a feeling of impatience with the "naturalness" which common sense, the press, and the arts continually invoke to dress up a reality which, through the one we live in, is nonetheless quite historical: in a word, I

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[289] Elkins, "Into the Maelstrom of Metaphor," 6.

[290] Barthes, "Myth Today," 142.

[291] Barthes, "Preface to the 1957 Edition," xi. Barthes states on this page, "[m]y effort at the time was to reflect regularly on some myths of French daily life. The material prompting such reflections could be quite various (a newspaper article, a photograph in a magazine, a film, a theatrical performance, a gallery exhibit), and the subject quite arbitrary, depending of course on my own interests at the time."

[292] Al Jazeera English, "Roland Barthes."

resented seeing Nature and History repeatedly confused in the description of our reality, and I wanted to expose in the decorative display of what-goes-without-saying the ideological abuse I believed was hidden there.[293]

At present, culture at large is both formed and practiced across digital networks and computer screens, both of which diffuse culture across an eclectic techno-sphere and infiltrate, from the epic drama of daily politics to the more prosaic habits of consumers inculcated in an ever more digitized global economy. In the current political environment, utopian and dystopian rhetoric clashes in the streets and alleyways of social media spheres and politically homogeneous websites.

While much of the underpinnings of digital culture are hidden beneath a technologically complex system of electronic hardware and multitudinous languages of algorithmic software code, the increasing reliance on screens within industrialized society makes cultural experience a progressively visual one. And inasmuch as reliance on screens increases at the same time that technology becomes more and more complicated than the average user can even fathom, the ideological influence of digital culture becomes ever more pronounced. Video games are especially potential forms of media expression because of their ubiquity and commercial influence. In recent times, video gaming is one of the most profitable entertainment activities in today's global economy, eclipsing the TV, film, and music industries as of 2018, with the rise of e-sports being a major catalyst for the industry's growth.[294] In point of fact, the multiplatform action-adventure game *Grand Theft Auto 5* (2013) exceeded six billion dollars in revenue in

[293] Barthes, "Preface to the 1957 Edition," xi.

[294] OppenheimerFunds, "Investing in the Soaring." OppenheimerFunds lists its sources as "Newzoo forecast for gaming revenue, Statista forecast for TV and global box office revenue, [and] IFPI actual data for global digital music revenue." My bibliography lists updated reports. See Wijman, "The Games Market." See also Navarro, "Global box office revenue" and "IFPI issues Global Music."

2018, "making it the highest-selling title in any category of entertainment."[295] Market forecasts show no signs of the industry slowing down, and further growth will almost certainly be further propelled by the advent of mobile gaming.[296] Certainly, the growth of the medium has likewise been accelerated by exponential advances in computer hardware and software technologies, including graphics processing units (GPUs), central processing units (CPUs), and rendering software like *Unity* and *Unreal*.

Because video games are a staple object of media consumption in today's day and age, they are at the forefront of mass ideology. They are symptoms of an algorithmically-ordered, hierarchical, and biased culture of representation. The ordering disposition of contemporary digital culture forms subjects out of its users. Hartley defines "subjectivity" as "[t]he social production of selfhood."[297] In other words, video games belie their promise of freedom from reality and instead produce the given reality unquestionably assumed by its players, profoundly forming their conventions, beliefs, and actions through visually coded sign systems that are not unlike the ideological systems embedded in painting and film.

Video games, like film, derive much of their ideological influence from their use of linear perspective. Linear perspective is a standard tool for imitating human vision, and the implicit association of human vision with an objectively seen, knowable world grants video game images, or gamic images, the power to form and influence their viewing and playing subjects. Linear perspective, though a powerful and fundamental part of video games as an ideological apparatus, also works in conjunction with other aspects of video game form, much of which is

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[295] OppenheimerFunds, "Investing in the Soaring."

[296] Wijman, "Mobile Revenues Account."

[297] Hartley, "Subjectivity," 241.

visual and shared with film. The primary culprits behind gamic subjectivity after linear perspective are gamic montage and replays.

Gamic montage is any switch of the camera from one shot to another during a game. A shot is any uninterrupted run of camera footage.[298] Montage can occur during gameplay, such as during a strategic airship battle in the Dreamcast JRPG *Skies of Arcadia* (2000), or outside of gameplay, for example, when switching between menus during a pause screen to configure character equipment and ability loadouts in the Switch JRPG *Xenoblade Chronicles* (2010).[299] Montage can also occur between moments of gameplay and even outside of gameplay, for instance, when Mario travels from one zone to another, punctuating the player's immersion with a loading screen in the Switch adventure platforming game *Super Mario Odyssey* (2017). They can be isolated events, as when switching between camera viewpoints in the multiplatform adventure game *The Elder Scrolls V: Skyrim*, or occur in a series of shots, such as in the cinematic race replays found in the Wii U racing game *Mario Kart 8* (2014).

Gamic montage is similar to cinematic montage but also has key distinctions. Montage as a whole is a technique practiced within visual art, film, literature, and music, and it is aimed at organizing disparate images within a work for expressive effects.[300] While examples of artistic, cinematic, literary, and musical montage are arguably found in video games, cinematic montage is the most common type of montage and the most important type to consider in video game criticism. Montage in film "refers to the organization of individual shots to create a larger

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[298] Sikov, "Mise-En-Scene," 7-8.

[299] According to Wiktionary, "loadout" in video games is defined as "[a] set of items and abilities chosen by the player before embarking on an in-game mission." See "Loadout."

[300] Williams, "Montage."

structure or narrative."[301] Montage translated to "assembly" in French, and I generally use the

term as synonymous with editing at large.[302] In film studies, film editing is generally understood

to be distinguished between two types, which are Hollywood continuity editing and Soviet

montage.[303]

According to film scholar Ed Sikov, Hollywood continuity editing is primarily concerned

with effacing itself, or hiding the cut so as not to break the viewer's immersion within the

narrative.[304] The aim of Hollywood editors is to establish smooth and easily understood action

between shots by relying on "matching screen direction, position, and temporal relations."[305] The

primary methods which editors use to hide a cut include graphic matching, matching on action,

and eye-line matching.[306] As an example, American director Buster Keaton's *Neighbors* (1920)

maintains continuity "by the spatial and temporal contiguity of the shots and the preservation of

direction between world and screen."[307] Additionally, Keaton's shuttling through the scene is

used to maintain continuity between shots through matching on action.[308] While montage was

part and parcel with film's essential conventions, "including its temporality and concatenation of

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[301] Williams, "Montage."

[302] Sikov, "Editing," 57. "In France," Sikov states, "the word *montage* simply means editing—*any kind of editing* [emphasis Sikov's]." As Sikov points out on this page and throughout his chapter, there are some nuanced distinctions here between different takes on montage and the kinds of editing associated with montage.

[303] See Sikov, 57-69 as an informative reference on distinctions between the two styles. Again, I am using "film editing" here synonymously with montage and signal further distinctions through such categories as continuity editing and Soviet montage.

[304] Sikov, "Editing," 63.

[305] Prunes et al., "Part 4: Editing."

[306] Sikov, "Editing," 63.

[307] Prunes et al., "Part 4: Editing." Prunes et al. are listed as contributors to the website as a whole at https://filmanalysis.yale.edu/. See Prunes et al., *Film Analysis*.

[308] Prunes et al., "Part 4: Editing."

images," early on in the history of the medium, Soviet filmmakers such as Sergei Eisenstein systematically explained and theorized the technique during the 1920s.[309]

For Soviet filmmakers, montage "was part of a larger structure that represented the dynamic elaboration or dialectical development of the narrative or conceptual content of the film."[310] As Sikov puts it, "shots were meant to *collide*; [Eisenstein's] style of montage was the opposite of smooth, apparently seamless continuity editing."[311] In *Film Form* (1949), Eisenstein compares the combination of film shots "to the series of explosions of an internal combustion engine, driving forward its automobile or tractor."[312] Eisenstein's approach to montage thus privileges disclosure of the cut for deliberate effect as opposed to Hollywood's masking of the cut for the purpose of narrative immersion.

Another helpful characterization of Soviet montage runs as follows: Montage "emphasizes dynamic, often discontinuous, relationships between shots and the juxtaposition of images to create ideas not present in either shot by itself."[313] In *Man with the Movie Camera* (1929), for example, Soviet filmmaker Dziga Vertov draws viewers to the cinema's powerful ability to form new realities out of disparate shots.[314] An example of a particular montage sequence is found in Eisenstein's *October* (1927), in which "increasingly primitive icons from various world religions are linked by patterns of duration, screen direction and shot … to

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[309] Williams, "Montage."

[310] Williams, "Montage."

[311] Sikov, "Editing," 57

[312] Eisenstein, *Film Form: Essays in Film Theory*, quoted in Williams, "Montage."

[313] Prunes et al., "Part 4: Editing."

[314] Prunes et al., "Part 4: Editing."

produce the concept of religion as a degenerate practice used to legitimate corrupt states."[315] This sequence is founded on the particular Soviet montage technique called intellectual montage.[316] Intellectual montage establishes a metaphor by combining images that form some sort of "intellectual meaning."[317] A contemporary example is given in a short film exercise by Mohamed Almubarak, in which a Tennis training sequence is crosscut against caring for a baby.[318] Almubarak draws a metaphorical comparison between the daily rigors of competitive athletic training with those of childcare. Effective intellectual montage not only clarifies a concept through comparison with something else but also formulates a new idea through the juxtaposition of two or more images. In Almubarak's film, for example, dissonance is generated from the mixing of the concepts of both glory, associated with that of sports achievement and the rigorous training associated with it, and the relatively non-glamorous rigor of childcare. While both sports training and childcare are stringent work, the latter lacks the kind of exuberant public appreciation and reward-giving associated with sports. In another example, see Allison Williams' modification of a Nuffield Health TV advertisement by splicing in footage of a blooming flower.[319]

While the Hollywood tradition of filmmaking largely ignored Soviet montage following its initial developments, Avant-garde and even Hollywood filmmakers revitalized the style in later decades.[320] In Hollywood, the influence of Soviet filmmaker Vsevolod Pudovkin (*Mother*

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[315] Prunes et al., "Part 4: Editing."

[316] Prunes et al., "Part 4: Editing."

[317] Renée, "10 Different Kinds of Montages."

[318] Almubarak, "Intellectual Montage."

[319] Williams, "Intellectual Montage."

[320] Williams, "Montage."

[1926] and *Admiral Nakhimov* [1947]) is found in John Ford's *The Grapes of Wrath* (1939) and Francis Ford Coppola's *The Godfather* (1973).[321] In *The Godfather*, for instance, during the film's final scene in which the baptism of Michael's son is crosscut with his rivals' killings, temporal continuity is actually undermined—against Hollywood's usual designs—in order to express "Michael's dual nature and commitement [*sic*] to both his 'families' … through religion and violence."[322] Cinematic montage in video games finds influence in the traditions of both continuity editing and Soviet montage.

Gamic montage occurs in various forms, both during gameplay and outside of it. The most common and easily identifiable use of montage in video games is the cutscene, which commonly takes the form of a film segment that appears during a game, although it can take other forms. So long as there is any amount of cutting occurring during the scene, the segment is directly injecting film form into the game experience. The transition from gameplay to a cutscene or vice versa could also be considered an edit in itself, a montage between two essentially different media forms.

Game design writer Hugh Hancock defines the term cutscene as "any non-interactive storytelling or scene-setting element of a game."[323] A cutscene is also sometimes referred to as an "in-game cinematic" or an "in-game movie."[324] While many cutscenes are essentially films used within games, some cutscenes are provided in nonfilmic ways. For example, the third-person shooter *Max Payne* (2001) for PC tells its story via comics, and the Dungeons-and-Dragons-inspired PRG series *Baldur's Gate* (1998-2020) for PC relies heavily on text and audio

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[321] Prunes et al., "Part 4: Editing."

[322] Prunes et al., "Part 4: Editing."

[323] Hancock, "Better Game Design Through Cutscenes."

[324] "Cutscene."

for narrative effect.[325] However, when I refer to cutscenes, I am referring specifically to non-interactive films used within games to tell a story or set a scene, or what I also refer to as filmic cutscenes.[326] Filmic cutscenes come in the form of both live-action movie scenes and pre-rendered computer-generated movies.[327] In the early history of video games, cutscenes were commonly provided by way of live-action movie scenes, such as in the RTS PC game *Command & Conquer*. Today, however, most cutscenes use pre-rendered graphics made capable via advancements in graphics technologies.

Perhaps one of the most cinematically inspired video game franchises is Naughty Dog's multiplatform action-adventure series *Uncharted* (2007-2022), which unsurprisingly was adapted to film and released in 2022. As writers Chris Melissinos and Patrick O'Rourke explain, the PlayStation 3 game *Uncharted 2: Among Thieves* (2009) features a high level of acting and dialogue, as "the game's voice actors rehearsed together before recording in order to keep the pacing and tone accurate."[328] The actors also frequently recorded their acting using "motion capture technology to translate their physical movements into the digital world."[329] In term of its setting, *Uncharted 2* draws inspiration from places as varying as Peru, Istanbul, and Nepal.[330] The next-generation rendering capabilities of the PlayStation 3 allowed creative director Amy

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[325] Hancock, "Better Game Design Through Cutscenes."

[326] An exception can be made regarding quick-time event (QTE) cutscenes, which require the player to interact superficially within a cutscene. For example, in the PlayStation 2 third-person action game *God of War* (2002), the player is at times required during a cutscene to push a certain button displayed on the screen with accurate timing (the player is given a visual cue when to do so) in order for the rest of the cutscene to play out. Otherwise, the player character Kratos is killed, resulting in the player having to try the attempt again.

[327] Hancock, "Better Game Design Through Cutscenes."

[328] Melissinos and O'Rourke, "Uncharted 2: Among Thieves," 204.

[329] Melissinos and O'Rourke, 204.

[330] Melissinos and O'Rourke, 204.

Hennig to "render the environments in a photorealistic manner with an extraordinary attention to detail."[331] The writers further detail how, "[t]he locations take on a personality of their own, and Nathan's body responds fluidly to the numerous obstacles. From climbing to wading to sliding down a zip line, the animations of Drake's actions fit each environment well."[332] The combination of innovations in "art, animation, and acting, effectively [brings] the player into an interactive movie instead of just an action game."[333] What is most significant here is how much the cinematic qualities of *Uncharted 2* add to the game's interactivity, even overshadowing its gameplay mechanics by engaging the player's imagination as a novel might. Melissinos and O'Rourke seem to detail the ways in which some video games might be better conceptualized as interactive cinema rather than video games. Thus, the effectiveness of narrative imagery in video games threatens a stable ontology of video games like a hinge separating game and film or even painting.

Given that the whole point of a video game is to provide the user with a more active form of experience, that is, playing a game instead of passively viewing a movie or painting, one might wonder why non-interactive cutscenes are indeed so common in video games. Indeed, the effect of removing the player from the game and interrupting the play experience with a movie, even a short one, can be jarring. The unskippable cutscene in the common discourse of video games has become a conventional term, a much-maligned intruder to gaming that nonetheless seems to be put up with as something to simply be suffered, like overlong movie previews before a big blockbuster film. An example of an unskippable cutscene is found in the action RPG

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[331] Melissinos and O'Rourke, 204.

[332] Melissinos and O'Rourke, 204.

[333] Melissinos and O'Rourke, 204.

PlayStation 2 game *Kingdom Hearts* (2002), in which players who may want to play the game more than once or who may simply be disinterested in some of the narrative aspects of the game must nevertheless let every cutscene play out in its entirety.[334] This design flaw is all the more apparent during one particularly difficult battle in the game in which the player must rewatch the cutscene as many times as they have to retry the battle; in other words, they are not given the option to skip the cutscene after pausing the game, as is often the case.[335] The action-stealth PlayStation 3 game *Metal Gear Solid 4: Guns of the Patriots* (2008) holds two Guinness World Records for its lengthy cutscenes, one record for the longest cutscene, going for twenty-seven minutes, and another record for the longest sequence of cutscenes, consisting of four cutscenes adding up to a total of seventy-one minutes.[336]

The continued insistence on including cutscenes in video games is bizarre enough, given that most players probably care more about gameplay than narrative. But what is truly fascinating about their unceasing inclusion is just how often they are used, even in this modern age of gaming, and how much they are put up with even as they are so maligned by many players. It is almost as if the lengthy, unskippable cutscene has become a rite of passage for players, something that appears annoyingly irrational to the outsider but which is uniting for those who have had to suffer through it together if only so they could complain about such aspects that have become commonplace in gaming culture. It becomes a stamp of pride one carries when realizing that such discursive interactions separate them from those outsiders who only cast cynicism in response, often parents, teachers, politicians, and other authority figures

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[334] Bishop, "10 Worst Unskippable Gaming Cutscenes."

[335] Bishop, "10 Worst Unskippable Gaming Cutscenes."

[336] Bowen, "10 Of The Longest Cutscenes."

whose suspicious detachment triggers for the insider an affirmation of secret knowledge. Gaming

culture is rife with such subversive conventions that embolden camaraderie among its

participants.

For Galloway, cutscenes, or what he describes as "cinematic interludes," serve the

utilitarian purpose of explaining the game's narrative in ways not possible with gameplay, but

also are induced "by a nostalgia for previous media and a fear of the pure uniqueness of video

gaming."[337] Galloway relates cinematic interludes with another category he deems the "ambience

act," introduced in chapter 2 of this dissertation, which "is an action executed by the machine

and thus emanates outward to the operator[.]"[338] Again, Galloway provides an example of this

act in *Shenmue*, in which the game, when left alone, nonetheless produces a state of continuous

temporal motion, marked by the continual movement of weather, nature, people, and objects on

screen as if the world has a life of its even without the player's interaction.[339] Galloway

characterizes both the ambience act and cinematic interludes as "*diegetic machine acts* [emphasis

the author's]."[340] In other words, they are associated with the game's narrative and are imparted

by the machine rather than the player.

Cinematic interludes provide a sense of safety in the occasional (or not-so-occasional)

articulation of film. Although film tends to work by hiding its production, cutscenes, for

Galloway, "are a window into the machine itself, oblivious and self-contained."[341] For the

player, this sudden step away from gameplay to a cutscene is ironic. Whereas a Hollywood

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[337] Galloway, "Gamic Action, Four Moments," 11.

[338] Galloway, 11.

[339] Galloway, 10.

[340] Galloway, 12.

[341] Galloway, 12.

movie typically hides its production and, according to apparatus theory, thus produces ideology, the transition from gameplay to a cutscene in a video game rather produces a knowledge effect. Galloway suggests that such moments are "the most purely machinic or 'digital' moments in a video game, the discarding of operator and gameplay to create machinima from the raw machine[.]"[342] This "discarding" of the player's active participation in the game is jarring, and the sudden cessation of play ironically produces a knowledge effect for the player.[343] By removing player agency so suddenly, the player's immersion is disrupted as they are undoubtedly aware that the nature of the medium they are experiencing has transformed based on the sudden limits of their new experience. The movie they are confronted with upends their progress, but it is also usually short or superficial enough not to draw the player into the immersive suspension of disbelief normally enabled by a movie per se. Rather, the movie becomes something to suffer through, an obstacle not unlike an enemy to outmaneuver in a level, and yet the player finds some justification in its intrusion by the imparting of some narrative information, a plot point, the development of a character, or some other world-building spectacle which provides some pretext for their play in the first place.[344]

That film is invoked in games out of "a fear of the pure uniqueness of video games" is an interesting point to expand upon in relation to film.[345] Despite Hollywood's intention to hide the productive base of film in order to fully immerse its viewers, it hesitates to go further than it could theoretically go. Paratext conventionally accompanies both film and literary texts and acts

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[342] Galloway, 11-12.

[343] Galloway, 11-12.

[344] Galloway, 11. Galloway states on this page, "cinematic elements … often [carry] the burden of character development or [move] the plot along in ways unattainable in normal gameplay."

[345] Galloway, 11.

as a safeguard against over-immersion within a work. Paratext is text that is outside of the story and surrounds it, and, in literature, it includes "the title, the author's name, cover art, a synopsis, pull quotes from authors … acknowledgments, title pages, author notes, maps, family trees, … and dedications[.][346] French literary theorist and critic Gèrard Genette introduced the concept of the paratext in an article entitled "Introduction to the Paratext," in which the Genette states, "the paratext is for us the means by which a text makes a book of itself and proposes itself as such to its readers, and more generally to the public."[347] In other words, the paratext forms a commonly accepted assembly of the self-reflexive parts of a work. Movie audiences are regularly treated to credit sequences, for example, either before or following a film or even during an introductory sequence.

Movie DVD and Blu-ray box art and video game box art constitute film and games as commercial objects. Paratext also commodifies a work, transforming the experience of being whisked away into a film narrative or totally immersed in a video game's virtual world into a physical object, an item with the necessary information to assure the user a certain amount of safe distance between reality and fantasy. This feeling of the whole concept of the work being encapsulated in the physical object which contains it is exemplified in the video game, trading card game (TCG), and comic book collecting hobbies, in which enthusiastic collectors pay jaw-dropping sums of money for certain works in an encased and therefore unusable form, with higher prices paid to items deemed in exceptionally pristine form.[348] There is some irony here in that the condition of an item is generally considered better the less played or read it is whilst one

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[346] Nassor, "How We Sell Stories."

[347] Genette, "Introduction to the Paratext," 261, quoted in Nassor. "How We Sell Stories."

[348] Bailey, "Collectors Are Spending Thousands."

might argue that the true work exists instead in the user's experience with it rather than in its untouched paratextual substance.

While the viewer may feel as though they are escaping their unmediated reality through an immersive work, there is always the paratext to fall back on, something just tangible enough to assure the reader it is only make-believe, however effective diving fully into the work may be. Even virtual reality (VR) is not immune to the paratext of the VR hardware, which includes the physical allocation of the hardware on the body and even the whole notion of a VR technology and industry floating in the back of the user's mind.

Humans are as enamored with representation as they are afraid of it, and one way to ease into a new form of expression harbored by technological and other changes throughout human history is to fall back on what people are used to. In the earliest days of film, before the movie-going public at large became accustomed to the language of film form, before the experience of film viewing was so inculcated in the daily lives of the public (today, the screen has become so ubiquitous that film viewing is altogether nearly impossible to avoid, even if it is taking on vastly different forms), early filmmakers took extraneous steps when showing movies to the public due to uncertainty around audience reception around the new art form. As film editor Walter Murch explains, these filmmakers were so nervous about the ability of the viewer to assimilate information between editing cuts that there was for a time in Spain, as well as in various other countries, the role of an *explicador*, one who explained what had occurred between cuts, to explain, for example that a camera had simply zoomed in for a close-up shot on the subject and that the head was not in fact decapitated by having the rest of the body fall out of frame.[349] In a way, the *explicador*, like the title cards used early on in film to provide a narration of events

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[349] Sheffield DocFest, "Craft Summit 2017."

similar to that conventionalized in a literary work, exposes a fetishization of literary narration not unlike that of video games' "grotesque fetishization of the game itself as machine [wherein] … [t]he machine itself is put at the service of cinema."[350] Paratext provides a similar comfort to readers, viewers, and players, which is that media, by its self-reflexive dependence on older media, is after all, only media in the end and can therefore be trusted. It is a loophole in apparatus theory that perhaps suggests the dependence of society at large on electronic modes of representation. This superficial dismissing of representation as just pretend also prods a tension between humanity's coetaneous and contradictory obsession with the mediated realities which so heavily influence and structure daily life.

Whether video games so frequently utilize filmic cutscenes out of narrative necessity or out of dependence on more well-trodden media, the use of cutscenes nevertheless represents the purest form of film's influence, simply allowing the movies to come in for a duration of time to take the reins from the player. But film has influenced video games in other ways as well. I will cover a few of these before arriving at the place of montage within games, which I consider the most crucial filmic aspect of video games, even if the notion of montage in games compared to film requires reconfiguration in how it is applied.

One of the most remarkable paradoxes of media is how alike and different they can be at once. Foucault likens film to the theater: "The theater brings onto the rectangle of the stage, one after the other, a whole series of places that are foreign to one another[.] … Thus it is that the cinema is a very odd rectangular room, at the end of which, on a two-dimensional screen, one sees the projection of a three-dimensional space."[351] Galloway remarks that film and video

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[350] Galloway, "Gamic Action, Four Moments," 11.

[351] Foucault, "Of Other Spaces," 25, quoted in Galloway, "Origins of the First-Person Shooter," 39.

games "are butting up against" one another, and that they influence and assimilate each other in innovative ways.[352] Some intrusions of film, like those of cutscenes, more or less retain the grammar of the former medium and are simply transposed within the grammar of the new medium. For example, in *The Elder Scrolls V: Skyrim*, the player can remove virtual books from virtual shelves in virtual homes but can also open a book and read short fiction. The experience of reading the book is not drastically changed by doing it in *Skyrim* instead of at the local library. Yet there are also cases when the same element is totally reconfigured within the language of another medium. The first-person point-of-view (POV) shot and continuous shot form two areas where use is drastically different between film and video games.

Galloway discerns important differences between the general POV shot in film and the subjective shot: the POV shot approximates the particular vantage point of a character, as with a shot/reverse-shot sequence, while the subjective shot is more precise and means "to show the exact physiological or emotional qualities of what a character would see."[353] However, within the context of my argument, I use the term first-person perspective, or POV shot, for simplification. What is most important here is the fact that the same POV shot used in film is almost visually identical to the POV shot used in first-person video games yet carries with it completely different conventions of expression; in this regard, Galloway states, "with FPS games, the first-person subjective perspective is so omnipresent and so central to the grammar of the entire game that it essentially becomes coterminous with it."[354]

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[352] Galloway, "Origins of the First-Person Shooter," 39.

[353] Galloway, 41.

[354] Galloway, 63.

Galloway reports, drawing upon assertions by both philosopher Fredric Jameson and film theorist David Bordwell, that the POV shot in film is marginalized, that is, it is used infrequently and for deliberate purposes.[355] In film, the POV shot, what Galloway specifically addresses as the subjective shot, is more particular to the physiological imitation of human vision than the more generalized POV shot: these subjective POV shots "pitch and lurch[,] … get blinded by light or go blurry."[356] This physiological imitation is also present in FPS games.

Again drawing from this suggestion made by both Jameson and Bordwell, American director Robert Montgomery's film noir *Lady in the Lake* (1947) represents "the most fully formed early example of the subjective shot."[357] Nearly the entirety of the film is shot from the POV perspective of the protagonist.[358] The experiment was later replicated in the American television series *The Plainclothesman* (1949-1954) and American director Delmer Daves' *Dark Passage* (1947).[359] Similar camera experiments are occurring today in video games. While not utilizing the first-person perspective, the PlayStation 4 game *God of War* (2018) utilizes one unbroken shot from beginning to end, allowing the game to emphasize "the characters rather than the spectacle."[360] While other games such as the multiplatform stealth-action game *Metal Gear Solid V: The Phantom Pain* (2015) and the multiplatform adventure game *Hellblade: Senua's Sacrifice* (2017) "have used similar techniques, it was never to the extent *God of War*

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[355] Galloway, 42-43. See Jameson, *Signatures of the Visible*, 112. See also Bordwell, Staiger, and Thompson, *The Classical Hollywood Cinema*, 31-32.

[356] Galloway, 43.

[357] Galloway, 43.

[358] Galloway, 43.

[359] Galloway, 44-45.

[360] Gingerich, "God of War's One-Shot Camera."

director Cory Barlog envisioned.[361] This rather recent development goes to show that innovations in cinematic storytelling are taking place to some extent in video games as well as traditional cinema.

Galloway observes that while the generalized POV shot is quite common in film, the subjective shot is less so, at least in narrative filmmaking.[362] Even the generalized POV shot, however, is broken up by a tremendous variety of third-person shots and is likely typically overshadowed by them. In any case, the generalized POV shot is more utilitarian than expressive. As mentioned previously, it is conventional for POV shots to approximate the object of a character's sight for the viewer.[363] I would wager it serves no further purpose than precisely this in the vast majority, if not all, cases. The subjective POV shot is used deliberately, connoting a kind of "negative vision."[364] The negative vision imparted by the subjective POV shot in film usually takes one of the following forms: "mental affect," as in the perspective of an intoxicated or otherwise inebriated character;[365] "detachment or distancing," as in the conveyance of alienating disembodiment either physically or psychologically;[366] as well as "criminals and monsters"[367] and "computers,"[368] in which the subjective shot forms a sort of optical default space for the inhuman.

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[361] Gingerich, "God of War's One-Shot Camera."

[362] Galloway, "Origins of the First-Person Shooter," 45-46.

[363] Galloway, 41.

[364] Galloway, 46.

[365] Galloway, 46-47.

[366] Galloway, 47-50.

[367] Galloway, 50-53.

[368] Galloway, 53-56.

FPS video games directly copy the subjective POV shot used in film "and therefore are the visual progeny of subjective camera techniques in the cinema."[369] The typical "iconography" of second-most importance to the identification of the FPS game's visual grammar is the inclusion of a weapon, which "generally appears in the right foreground of the frame."[370] This particular congruence of POV shot with a weapon does appear at times within film, even early on in its history. It appears in American director Buster Keaton's *Go West* (1925), English filmmaker Alfred Hitchcock's *Spellbound* (1945), and American director Steven Spielberg's *Jaws* (1975), although, in some instances, the weapon inclusion is that of an animal rather than a firearm.[371] Viewers can similarly find links between film and video games in the use of the third-person over-the-shoulder shots, for example, between American director Gus Van Sant's *Elephant* (2003) and *Max Payne*. Thus, film has created "certain visual styles that would later become central for first-person shooter video games."[372] At the same time, video games have also inspired changes to filmmaking, such as through the training-level inspired training scenes in the American directors Wachowskis' *The Matrix* (1999), inspired by such training sequences provided in games like the FPS *Half-Life* (1998) for the PC.[373]

Galloway refers to training sequences as well as other cinematic conventions inspired by video games as "gamic cinema," more explicitly wherein "specific formal innovations from games have migrated into the formal grammar of filmmaking."[374] Elements of gamic cinema also

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[369] Galloway, 57.

[370] Galloway, 57.

[371] Galloway, 58.

[372] Galloway, 62.

[373] Galloway, 62.

[374] Galloway, 62.

include what is known as "bullet time," as used in *The Matrix*.[375] Bullet time is another example

in which time appears to slow or stop altogether "while the time of the film continues to

proceed."[376] As important as these moments of gamic cinema are, they are yet not as common or

easily achieved in film, as Galloway explains: "Films are time based and must transpire through

time in order to be played. Thus 'bullet time' in *The Matrix* is one of those rare moments of

cinematic illusion where the digital aesthetics of gaming actually penetrates and influence the

aesthetic of the film."[377] Going further, whereas including film in video games is as simply done

as including cutscenes throughout a game, movie-going audiences would probably be less kind

to suddenly being asked to put on VR goggles midway through the film and be asked to play a

video game in order to finish the narrative. Galloway observes that video games, in a purer sense

it would seem, operate according to a totally different "way of seeing," particularly regarding the

lack of montage" in first-person gaming.[378] He explains that "in gamic vision *time and space are

mutable within the diegesis in ways unavailable before* [emphasis Galloway's]."[379] Centrally,

video games persist beyond "real, optical time."[380] Consider again the aforementioned diegetic

machine acts represented by cutscenes and the ambience act in Galloway's classification system

of gamic action. The player can leave the machine running and step away whilst the machine

hums along, the world sustaining a life of its own. This passive mode of gaming can even form a

new type of experience for the player. In environmentally rich game worlds like those found in

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[375] Galloway, 63.

[376] Galloway, 66.

[377] Galloway, 66.

[378] Galloway, 65.

[379] Galloway, 65.

[380] Galloway, 65.

the online PC MMORPG *Final Fantasy XIV: A Realm Reborn* (2013) and *No Man's Sky*, gameplay is typically oriented around creating a stationary site such as a housing complex or camp for the player to settle down in, to enjoy the ambient world around them, complete with its own day/night and weather cycles and animal migration patterns.

In other words, while there are things in film which can appear within video games, it is harder to replicate the unique characteristics of video games in film. Bullet time is one of these rare elements of gamic cinema. Galloway does add one complicating factor to this particular example, the fact that bullet time does rely on the older medium of photography, which could mimic bullet time by "using an arc of a few dozen still cameras, a film camera on each end of the arc, and a cutting suite."[381] The complicated allegiance of bullet time, then, goes to show how dependent seemingly distinct media are on one another, how complexly intermingled their histories are within the larger history of visual art.

Galloway makes a vital claim here that montage is less central to video games than it has been in film.[382] While cutscenes used in games make use of montage, the medium-specific experience of playing games is typically devoid of editing.[383] Exceptions are mainly found in switching between different gameplay modes such as switching camera positions or "opening the map in *World of Warcraft* [2004]."[384]

Bogost agrees with this position. Whereas editing has been central to cinema throughout its history, video games mostly lack editing and really "can't, because continuity of action is

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[381] Galloway, 67.

[382] Galloway, 64. On this page, Galloway states, "gaming *makes montage more and more superfluous* [emphasis Galloway's]."

[383] Galloway, 63-64.

[384] Galloway, 65.

essential to interactive media."[385] Bogost notes as well that, unlike in film, video games allow the player to directly manipulate the camera, controlling the vantage point of object of sight.[386] He does recognize what is perhaps the most prominent exception to the lack of editing in games, that of the multiple fixed-angle shots which construct the play space in survival horror games such as *Resident Evil* (1996) for the PlayStation (or its GameCube remake), in which control of the camera is removed in order to instill a sense of dread in the player.[387]

Bogost argues that the PlayStation 3 "murder-mystery videogame drama" *Heavy Rain* exemplifies the video game medium's effective reliance on continuous camera movement over cinematic cuts.[388] The author notes that while one particular scene in the game, in which the main protagonist loses sight of his son in a crowded mall, would almost certainly be carried out through film via successive cuts, the lengthy, unbroken shot that is used instead much more effectively mirrors the "slow panic of confusion and disorientation, the feeling of extended uncertainty as moments give way to minutes."[389] In short, "the central sensations of that experience are not rapidness but slowness."[390] While Bogost argues that *Heavy Rain* does utilize mise-en-scène in a fashion after film, the interactivity of the game world is accentuated via a lack of "attention-directing devices," such as editing cuts that makes the game so successful in evoking emotions in the player.[391] For Bogost, *Heavy Rain* is indicative of the power of the video

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[385] Bogost, "The Long Shot," 96-97.

[386] Bogost, 97.

[387] Bogost, 97.

[388] Bogost, 98.

[389] Bogost, 99.

[390] Bogost, 99.

[391] Bogost, 101.

game medium's distinct ability to express meaning through continuity, rejecting filmmaking's "primary operation" in favor of "inviting the player to … linger on the mundane instead of cutting to the consequential."[392] And yet even *Heavy Rain*, in all its effectiveness in bucking the staid conventions of both video games and film, does not exclude cutscenes.

Bogost and Galloway share an important claim that video games tend to rely on unbroken continuity throughout gameplay, in contrast with film's reliance on editing. An important exception to this distinction should be addressed by means of the long take or continuous shot in film. The one-take scene, or "oner," is a lengthy camera sequence devoid of cuts or edited in such a way as to give the illusion of one unbroken camera shot.[393] The one-take gives the viewer a sense of watching in "real-time" to create tension.[394] Bogost rightfully observes that filmmaking does typically rely on editing.[395] However, the one-take is an important tool that has found plenty of effective use in cinema. Famous examples can be found in the films *Children of Men* (2006), *1917* (2019), and *Extraction* (2020).[396] While Bogost contends that the *Heavy Rain* scene, in which the father protagonist loses sight of his son in the mall, would most likely be carried out in film through typical quick-cut edits, a filmmaker might justify shooting such a scene in one-take in order to accentuate the "slow panic of confusion and disorientation, the feeling of extended uncertainty as moments give way to minutes" which *Heavy Rain* effectively does through unbroken interactivity.[397] Cinema provides plenty of examples in which the camera

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[392] Bogost, 102.

[393] Mendelovich, "One-Take Cinematography (Oner) Techniques."

[394] Mendelovich, "One-Take Cinematography (Oner) Techniques."

[395] Bogost, "The Long Shot," 99.

[396] Mendelovich, "One-Take Cinematography (Oner) Techniques."

[397] Bogost, "The Long Shot," 99.

focuses on the quotidian or highlights the mundane or ancillary subject, although such instances are more likely found in avant-garde works than in big blockbuster movies. *Heavy Rain* is notable for being a major commercial title that subverts typical video game experiences in favor of a more deliberate and artful presentation of the narrative. Just so, the rare uses of montage which Galloway invokes in his examples of switching various game modes and camera switches beg the question of why such types of montage should exist at all in a medium so emboldened by unbroken continuity.

Bogost presents an analysis of the first-person action-adventure platforming game *Mirror's Edge* (2008) with a helpful emphasis on its visuals, intersecting with photography, in "The Long Shot" (2015). For Bogost, reflecting on insight by photographer Garry Winogrand, photography is a vessel for defamiliarization from the ordinary and revealing something else.[398] In other words, photography does not merely capture the world as it is but presents it through the mediated lens of the photograph.[399] This filtering inescapably renders not an exact imitation but rather an altered subject, conceptually real rather than literally replicated.

Bogost expounds on the deliberate artifice of *Mirror's Edge* through its peculiar gameplay, which presents the game world through a novel lens:

> It asks the player to see a credible, familiar world filled with cards, machines, hallways, and buildings in a different light. Each surface becomes a potential affordance for movement, and the player must learn to see fences, forklifts, ledges, and subway cards as tools of locomotion rather than as objects of industry. The game's promising if slapdash dystopic fiction offers an entry into this practice, by persuading the player that the city is encumbered with a classic appearance versus reality problem. Visually, the game brings about this means of looking by literally whitewashing as much of the environment as

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[398] Bogost, 73. Bogost states on this page, "[t]he photographer Garry Winogrand famously said that he took pictures to see what things look like photographed."

[399] Bogost, 73.

possible, such that its surfaces reveal very little. The fact that nearly everything is white—including the plants—acts as a perceptual reset.[400]

Mirror's Edge reconfigures the conventions of looking, extending merely seeing into moving through the game's "runner's vision," which highlights certain objects in red if they can be used to engage select types of navigation.[401] For Bogost, use of the first-person perspective enables a sense of uneasy fluidity as the parkouring protagonist, Faith, flits and flies from one end of the level to the other, instilling a sense of vertigo in the player who overcomes each challenge.[402] Bogost remarks that the first-person perspective was probably chosen over the more natural seeming third-person perspective to actually make the game more difficult, whereas the third-person perspective might otherwise have been more straightforward, the extra space provided in that vantage point making movement more predictable.[403] The use of first-person also allows the protagonist to equip a firearm in the vein of traditional FPS games, although the game undermines the FPS genre by deliberately making Faith weak in combat, encouraging instead close-range combat through the game's signature parkour movement.[404] While *Mirror's Edge* is a commercial title, it eschews gamer's conventions in a variety of ways. It is "about looking and moving in an unfamiliar way[.]"[405] The game exemplifies how different conventional visual grammars such as that emblazoned by the first-person perspective in FPS games can be when employed in creative, new fashions.

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[400] Bogost, 73.

[401] Bogost, 73-74.

[402] Bogost, 74.

[403] Bogost, 74.

[404] Bogost, 75-76.

[405] Bogost, 77.

This preference for pre-rendered cutscenes over live-action ones is, at least in part, I believe, a result of the awkward disparity created when moving between pre-rendered characters and settings and their live-action representations. In the early days of video games, I think, graphics appeared or were considered so unrealistic that any representational disparity between in-game graphics and film scenes was simply taken for granted as the result of the technological limitations of the time. Players might have even anticipated that the height of graphical realism would be something like commanding a character through a film scene. Indeed, interactive films such as the Sega CD game *Night Trap* (1992), which primarily utilized live-action film scenes, emerged as a short-lived genre. Interactive films continue as a genre today, for instance, with the multiplatform games *The Walking Dead* (2012) and *Tales from the Borderlands* (2014), but they are shown using in-game rendering instead of live-action filming.

The predominance of live-action film scenes in video games is today largely relegated to the past. In today's graphically rich gaming environment, video games have now surpassed the goal of photorealism, instead pursuing an ever-moving goalpost of hyperrealism. In visual art, hyper-realistic or super-realistic art is a relatively recent art category involving painting "based on photographs to achieve a hyper-realistic look that could easily be mistaken for a photograph."[406] This movement emerged during the late 1960s and early '70s and is represented in part by the American painters Chuck Close and Denis Peterson.[407] Whereas photorealist artists attempted to imitate photographed images as accurately as possible, hyperrealist artists reference photographs but also add details to simulate an artificial reality.[408]

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[406] Meyer et al., "Hyperrealism Art." Meyer et al. are contributors to the website at https://artincontext.org/team/. No individual author is specified for the article "Hyperrealism Art" besides "artincontext." See Meyer et al., "Our Team."

[407] Meyer et al., "Hyperrealism Art."

[408] Taggart, "The Evolution of Hyperrealism."

The progression of video game graphics parallels the hyperrealism of painting as visual culture at large is moving toward a collectively envisioned futuristic projection of society. Even film itself is threatening to move beyond photorealism with advancements in computer-generated imagery (CGI), the technological basis for creating visual content through computer software.[409] Japanese director Hironobu Sakaguchi's *Final Fantasy: The Spirits Within* (2001) is a notable example of film's ability to push the technology of the time to its limits, not only to deliver photorealistic images but also to create immersive artificial worlds that transport the viewer beyond their own world to new imaginaries. Ebert hails *Final Fantasy: The Spirits Within* as a "technical milestone," stating that the film "creates a world that is neither live action nor animation, but some parallel cyberuniverse."[410] Implying the film's hyperrealist pursuit, Ebert adds that the purpose of the film "is not to replace actors and the real world, but to transcend them—to penetrate into a new creative space based primarily on images and ideas."[411] *Final Fantasy: The Spirits Within* is arguably an early arbiter of hyperrealism in film and a turning point for the acceptance of CGI as the preferred vessel for advancing a realistic aesthetic that, as Ebert put it, "transcend[s]" "actors and the real world."[412] While Ebert was no fan of video games as an artistic medium, the technological transformation he observes in his review of *Final Fantasy: The Spirits Within* nonetheless parallels similar hyperrealist transformations that were also occurring in video games and had been occurring in painting.[413]

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[409] "What Is CGI?"

[410] Ebert, "Final Fantasy: The Spirits Within."

[411] Ebert, "Final Fantasy: The Spirits Within."

[412] Ebert, "Final Fantasy: The Spirits Within.

[413] Ebert, "Video games can never be art."

Hyperrealism undermines the unquestioned notion of technological progress toward ever more life-like images. Uncritically examined, the realist pursuit of using advanced technology to add more and more minute details to an image, details normally left out of an image because of technological restrictions, seems to be geared naturally toward the replication of ever more realistic images, particularly relative to the peculiar visual otherness typical of a visual work. For example, we are typically immediately aware that a painting is a painting and not whatever it represents. Yet eyes are flawed, deteriorating organs in need of recurrent medical intervention. Even those of us with the best vision are not immune to saccadic movements, entoptic phenomena, and other natural diversions from the frequently sought-after ideal of perfectly imitated realism.

Rather than uphold the imitation of reality as an idealized goal, hyperrealism exposes the uncanniness of preserving a singular, statically captured image of reality. The utopian end of a perfectly realized realism represents an idealized telos guiding the perspectival and otherwise realistic characteristics that express the progress of visual art, from painting to photography, film, and, today, in video games.[414] While seemingly subversive, hyperrealism seems to also have been implemented in the commercial film and TV industry, as evidenced by the uncanny CGI sheen now anticipated in film and video games, which reveals continued advancement along the lines of realism. Or perhaps it reveals a privileging desire to move beyond the real toward some other uncanny end. We have come full circle from a steady beat toward perfect simulation toward what is now, in actuality, a retreat away from the eye's sense of what is real; yet, like

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[414] The idea of art following a historical trajectory toward a logical endpoint derives in part from German philosopher Georg Wilhelm Friedrich Hegel's "Absolute Idea," which art historians Michael Hatt and Charlotte Klonk describe as "the blueprint of the world and its gradual realization in particular expressions over the millennia. With each age the world gets closer and closer to understanding this ideal blueprint." Hatt and Klonk, "Hegel and the birth of art history," 24. See Hegel, *Aesthetics: Lectures on Fine Art*, volumes 1 and 2.

linear perspective, techniques for deriving these new computerized imaginaries are no less reliant on mathematics. If anything, representation is moving toward ever more algorithmically driven imaginaries, considered by artists and viewers alike to advance toward previously unseen possibilities that herald predetermined visions of a technologically-driven future.

Replays are a conventional feature of video games, common to shooting games and other types of action games, in which gameplay temporarily ceases in order to show the player a brief movie or highlight reel of something they just accomplished, like a kill or touchdown. Or the player might be shown, via a replay, the method by which they might have just been killed. Replays form a subset of gamic montage. Both features, tied more closely to film than to linear perspective per se, are explained in detail by way of the theory of the suture from film studies.

The suture is predicated on Lacanian psychoanalysis and was first articulated by Jacques-Alain Miller before its application to film.[415] Art historian Kaja Silverman characterizes the suture generally as the means by which "films are articulated and the viewing subject spoken by means of interlocking shots."[416] The suture is related to the technique of montage, by which shots are cut together in order to create an effect that is greater than the sum of their parts. Silverman reports film critic Jean-Pierre Oudart's characterization of the suture effect in classical cinema as one that works to conceal the viewer's passivity and delimit reality to the film text.[417] The suture effect derives its ideological power from the pronounced effect it has on the unconscious in the viewing subject. Film scholar Stephen Heath provides a description of this effect as characterized by psychoanalyst Jacques-Alain Miller, stating that the effect acts on "the

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[415] Heath, "Notes on Suture," 49. See Miller, "Suture: (elements." I use the terms "the suture" and "the suture effect" interchangeably.

[416] Silverman, "Suture [Excerpts]," 220.

[417] Silverman, 221.

unconscious … [as] not so much a position as an *edge*, the junction of division between subject and Other, a process interminably closing [emphasis the author's]."[418] If one thinks about two shots adjacent to one another on a film reel, edge to edge, then the suture effect occurs at the moment of transition between the two, too quickly for the conscious mind to notice but effective enough to act upon the viewer unconsciously, briefly reassembling the viewer through the moment of juxtaposition between images. In truth, because there are no actual moving images on the film reel, only the impression of moving images created by critical flicker fusion, the suture is a persistent effect, even if the conscious mind is not even aware of the cuts between each frame.

The suspension of disbelief that results from this effect is not merely that of momentary escape from reality but rather a reconfiguration of the subject by the unconscious association of images and their accompanying signs. Past associations between signifiers and their signifieds are reinforced, altered, or wholly replaced. The suture effect in video games further scrambles the subject by tricking the player into taking part in the image not merely as an invisible voyeur but also as an active participant in the work. For example, when the camera switches from first-person perspective to third-person perspective, as is common in many games, the suture effect conjoins the player as both viewer and viewed. The player becomes a voyeur of their own self, a paradox invoking tension that is only resolved through control and ultimate mastery of the image made real before them.

Brief mid-action cutscenes and short replays rely on the use of suture for their ideological effect on the player, but they also have significant differences. Brief cutscenes can occur in the midst of gameplay and typically involve a temporary suspension of gameplay. In contrast, the

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[418] Heath, "Notes on Suture," 48.

replay, while largely relegated to the suspension of play, sometimes grants the player control over the camera, giving the player such options as rewinding, fast-forwarding, or changing the position of the camera.

An example of the suture effect occurring during a brief cutscene is found in the Xbox One FPS game *Halo 5: Guardians* (2015). The *Halo* series is acclaimed for its multiplayer mode, in which players navigate a map and score points by eliminating other players using an assortment of weapons. When a player is killed, they respawn, or reappear, at one or more predetermined spawn points to reengage in the battle. The game ends when a set amount of time runs out or a player or player team achieves a predetermined number of points. Players participate from first-person perspective; however, the camera shifts to third-person perspective when killed with a special melee move called an assassination. During this brief span of time, the player relinquishes control and must witness their assassination in the third-person. Of note is the fact that while the assassinated player and the player's assassin relinquish control for the duration of the cutscene, gameplay overall remains continuous as other players in the arena carry on. It is even possible to attack the assassin while the assassinating player is waiting through the assassination animation.

This perspective switch is a more recent development in the FPS genre. Typically, when a player dies in a game, they remain in the first-person perspective whilst some other screen effect signals the player's demise. In the Nintendo 64 FPS *Goldeneye 007* (1997), for example, the player, when killed, remains in the first-person perspective, loses control of their avatar, and watches powerlessly as the camera viewpoint falls to the ground, giving the impression of the character collapsing. Blood then spills from the top of the screen to the bottom like a falling

curtain. This effect is more similar to the subjective shot in film that Galloway describes.[419] The more conventional use of perspective switches in more recent times follows a trajectory in which video games are becoming more and more cinematic in general.

The use of this device is also common in the FPS genre, with some exceptions. A notable exception can be found, for example, in the isometric strategy game *Front Mission 4* (2004) for the PlayStation 2. In *Front Mission 4*, players move mechanized combatants around a chess-like field and order their units in combat by selecting from varying options each turn. Once an action has been selected, a visual sequence of attacks plays out like a brief action scene from a movie. Play is suspended whilst the player is forced to watch the effects of their orders play out, with no means of intervening if things do not go according to plan. What makes *Front Mission 4* stand out from other isometric strategy games from around the same time period (e.g., *Final Fantasy Tactics*) is the use of shot/reverse-shot camera patterns to display the combat resulting from the player's selections. For example, if the player moves their mechanized warrior, similar to a chess piece, in front of an enemy unit and orders that unit to attack, an animation of that unit then plays out, and the underlying software performs algorithms dictating changes to the game state, such as whether or not the attack hits, where the attack hits, and how much damage the attack does. In some cases, the enemy unit may also perform a counterattack. The player must sit idly and accept the results unless they want to start the round or, in some cases, the whole level over again.

In order for a player to pull off an assassination in *Halo 5*, one player must approach another player from behind and hold down the melee button, which normally engages a melee

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[419] Galloway, "Origins of the First-Person Shooter," 43.

attack when quickly pressed but will enable an assassination instead when held down.[420] A normal melee attack is not guaranteed to kill an opponent in one hit unless that opponent has already lost a certain amount of health. But if a player successfully approaches another player from behind, they perform an assassination move. Assassination moves are risky because they take a few seconds to play out the assassination animation, and the assassin is not immune from attack by other players while their kill animation is playing out. Once the animation is over, the camera reenters the player's avatar so that the player resumes gameplay from the first-person perspective. The switch invokes tension by temporarily suspending the player's active engagement, creating instead a passive cinematic experience in which the play is relegated to viewing.

Because viewing without direct control over the image goes against the active engagement of playing the game, the player is confronted with a few long seconds of anxiety that can be resolved in one of only two ways. Either the player succeeds in the assassination and reenters the active mode of play or the player is killed in the act, in which case the player reenters the engagement by respawning. Either way, cinematic output in games can only ever be a temporary state, necessary to invoke dissonance through the suspension of play and set up a harmonious resolution of that tension for the player. Just as shots collide in film to create succeeding moments of tension and resolution which perpetually reconfigure meaning for the viewer through the suture, so too does cinematic output—in this case suspending play entirely, though this suspension is not always the case—produce tension in the player by embedding the player into the image from different vantage points. This embedding forms a montage not only of

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[420] "Assassination."

the images placed before the viewer, as is the case with cinema, but also of images of the player/viewer as well.

The replay is an extended kind of cinematic output that comes in long and short forms. Long-form replays are recordings of entire runs of levels or game recordings substantial in length; short-form replays are brief clips of pivotal gameplay moments. These moments can include a kill made by a player or another critical player moment like a goal in a sports game or crossing the finish line in a racing game. FPS games frequently display short-form replays to the player each time they are killed. Among the earliest forms of short-form replays used in this way include *CS: GO*, although they are a staple device of the FPS genre today. After being killed by another player, the short-form replay restages the player's death from the perspective of the enemy combatant. The player sees the movements and actions the enemy combatant took so as to understand the means by which they were killed. The replay provides the practical benefit of educating the player in some way that might improve their skill going forward, such as revealing a hideout the enemy was using that the player of which the player might not have been aware.

At an ideological level, the replay memorializes a significant event in the game, thus building up the player as an active part of the game itself. No matter whether the player's action was good or bad, whether they scored a goal or fell into an enemy combatant's trap, the player is provided a sense of weight as an important part of the work itself, as if the video game depended on the player for its expression. It does not exist as a physical object as a painting does, even when not being viewed. Instead, video games are enacted through gameplay. The suspension of disbelief extends beyond the images put before the player as the player is convinced of their actual involvement. Virtual and real experience collides in the sutured space between player and

game, reconfiguring the player-subject through modes of control, power, and domination until these modes are unquestioned and implicit not only within the game but within society at large.

Throughout this chapter, I discussed Galloway's emphasis on action in video game analysis, yet I also examined the varied cinematic techniques at play in video game visuals. Galloway's system of action in video games is a phenomenally useful system for video game analysis that respects the unique features of the video game medium, and he also helpfully delves into cinematic influences of video games while also engaging with play as a cultural concept. At the conclusion of this chapter, I find that although the uses of cinema in video games appear less frequently in video games as a whole, these moments are still impactful and worthy of analysis through a greater intersectional emphasis with film studies.

Figure 7. "*Ghost in the Shell: Stand Alone Complex: First Assault Online* (2016),

Screenshot No. 1"[421]

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[421] Neople, *Ghost in the Shell: Stand Alone Complex.* My screenshot using Windows.

Figure 8. "*Ghost in the Shell: Stand Alone Complex: First Assault Online*,

Screenshot No. 2"[422]

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[422] Neople, *Ghost in the Shell: Stand Alone Complex.* My screenshot using Windows.

Figure 9. "*Ghost in the Shell: Stand Alone Complex: First Assault Online,*

Screenshot No. 3"[423]

During this replay, the recently killed player can configure weapon loadouts while

waiting to respawn.

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[423] Neople, *Ghost in the Shell: Stand Alone Complex.* My screenshot using Windows.

Chapter 4: Demoscenes, and Video Games as Cinema

As Galloway has suggested, video games hang on to montage and other filmic elements to a certain extent out of nostalgia or fear for the distinctly gamic. [424] However, expressive works known as demos embrace cinema as an equal partner and take up their own separate space between video game and film. Demos derive from the collaborative movement known as the demoscene. [425] I argue that they form effective models for nonconventional approaches to both filmmaking and game development. Their self-reflexivity and explicitly non- or anti-realistic expression liken them to the avant-garde movements in film and painting. While the demoscene movement appears to have lost momentum in this present moment, the demo nonetheless constitutes a subversive form of media that allows for a different mode of digital art production than the technological progressivism implicit in popular games and cinema.

Demos are a form of media derived from the demoscene, defined as "a worldwide non-commercial network of creative minds involved in the making of so called [*sic*] 'demos.'[426] Demos are computer generated music clips that show what kind of graphic and sound effects can really be done by using high-end computer hardware to its full potential."[427] Although demos are typically non-interactive, some are interactive to a degree. [428] They are highly collaborative works that require a team of technically skilled members working on disparate aspects such as graphics,

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[424] Galloway, "Gamic Action, Four Moments," 11.

[425] Heim et al., "The Demoscene." Heim et al. are listed on the publisher website Digitale Kultur e.V. on the "Contact" page via the "The Association" menu tab: https://www.digitalekultur.org/en/assoc_exec.html. No author is specified for the webpage "The Demoscene." See Heim et al., "Contact," Digitale Kultur e.V.

[426] Heim et al., "The Demoscene."

[427] Heim et al., "The Demoscene."

[428] Beregi, "Demoscenes," 249.

music, and programming.[429] The team members, called "sceners," typically collaborate virtually and, while global in makeup, mostly hail from Europe.[430] A staple tradition of the demoscene involves gathering for demoparties, or "gatherings organized by and for the creative computing underground."[431] Sceners gather both "for the joy of creation and also for artistic competition."[432] A demoparty competition is called a *demo compo*, consisting of several categories in which the audience decides the winners.[433] Unfortunately, sceners are not very diverse, as the demoscene has primarily been a male-dominated enterprise.[434] This homogeneous makeup of the demoscene is perhaps derived from the male-dominated history of commercial video game development.

The history of the demoscene spans approximately four decades and is represented by a wide variety of works, not only including demos per se but also "graphics, fotos, text-art (ANSI/ASCII-Art), videos, [and] interactive-installations," among other works on varieties "of hardware-platforms."[435] Indeed, a more visually-inclusive definition of demos describes them as "graphical showcases that oftentimes allow for no interaction whatsoever but instead serve as virtual portfolios and tests for what they can accomplish with some crafty programming."[436]

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[429] Heim et al., "The Demoscene."

[430] Heim et al., "The Demoscene."

[431] Oberhaus, "Who Killed the American Demoscene?"

[432] Beregi, "Demoscenes," 249.

[433] Beregi, "Demoscenes," 250.

[434] Beregi, "Demoscenes," 249.

[435] Kauppinen and Kopka, "About the Demoscene." Kauppinen and Kopka are listed on the "Contact" page of the website at http://demoscene-the-art-of-coding.net/contact/. No author is specified for the webpage "About the Demoscene." See Kauppinen and Kopka, "Contact," *Demoscene – The Art of Coding*.

[436] Roper, "Linger in Shadows Impressions."

Recent prominent examples of demos include *Eon* (2019) by The Black Lotus, which "combines a short film like [*sic*] design and visuals to unique audiovisual lo-fi experience," *Number One/Another One* (2018) by the collective CNCD Fairlight, and *Metamorphosis* by the Greek group Andromeda Software Development (ASD), which is noted for "[daring] to step away from the always-popular 3D."[437] Indeed, even demos, it seems, are not immune to the privileging of 3D representation so pervasive in commercial media.

Media scholar Daniel Botz, who wrote about the demoscene in his doctoral dissertation "Hacker-Ästhetic" (now published as the book *Art, code and machine—The aesthetics of the computer demoscene* [2011]), distinguishes demo aesthetics from conventional media art in an interview featured on the Chipflip demoscene blog:

> Basically, the classic media artist asks himself "What kind of technology would I need to realize my concept", while the demoscener asks "What can I achieve with the hardware in my hands", which is regarding technology as a priori. … Their aesthetic values are not based on infinite digital flexibility, but on the physical restrictions of computer platforms. That's why demoscene is not about an idealistic projection of future technology, but about the creative appropriation of present hardware.[438]

Botz makes a useful comparison here between the demoscene and electronic music. Citing the German writer Ulf Poschardt from his book *DJ Culture* (1998), Botz emphasizes that hip hop and techno music consistently refer to their own productive base rather than unduly hiding its base to appear as an isolated work existing in an audial vacuum.[439] The transparency the demoscene carries regarding its productive base starkly opposes film's intentional hiding of its production, wherein film is characterized by its ideological apparatus, as discussed in the previous chapter.

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[437] Kauppinen and Kopka, "About the Demoscene."

[438] Carlsson, "Demoscene Theory With Doctor Botz."

[439] Carlsson, "Demoscene Theory With Doctor Botz." See Poschardt, *DJ-culture*.

To better understand this distinction between the "classic media artist," as Botz puts it, and the demoscener, it is helpful to consider the intersection of commercial media in this regard.[440] The graphics of popular video games are typically marketed to consumers as reaching new heights of realism, able to immerse the player with the sole purpose of entertainment and, on an implied level, to participate in the best that gaming has to offer, at least until the inevitable advance of technology turns that epoch-breaking game into old news. A great deal of marketing speak focused on both realism and immersion pervades the commercial gaming industry. Although certainly not always predicated on the need to achieve realism or to entertain, the "classic media artist" places technology at the service of some kind of abstract ideal, which could be something Botz considers a concept, or also, I think, an explicit message directed at the audience.[441] If better technology suddenly arrives to the studio before the product is finished, and that upgraded technology might allow the developer or artist to push the final product that much closer to a better realization of realistic immersion or some other concept, all the better for it. For Botz, demoscene aesthetics turns this teleological standard on its head: technology is not placed at the service of the end concept; rather, the resultant work is appropriated creatively within the hard limits of the technology itself.[442]

Thus, demos are never rendered outdated because the productive tools are integrally tied up with the end work much more so than with a big-budget video game such as the multiplatform FPS *Call of Duty: Black Ops* (2010) or a blockbuster movie like Canadian filmmaker James Cameron's *Avatar* (2009), whose subservience to realism or some conceptual

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[440] Carlsson, "Demoscene Theory With Doctor Botz." Botz uses the term "classic media artist."

[441] Carlsson, "Demoscene Theory With Doctor Botz."

[442] Carlsson, "Demoscene Theory With Doctor Botz."

endpoint inevitably leads to embarrassment as onlookers look back at something that has devolved into a work that now more than anything else merely serves as a reminder of the limitations of the medium during that time. These products utilized technology to the fullest capacity possible at the time. If the developer or director could go back and push the technology further to enhance the work visually, they would, so long as doing so pushed further the creator's idealized notion of more realistic or spectacular imagery. Certainly American director George Lucas was of this mind when he felt it necessary to add newly rendered CGI scenes and a myriad of additional special effects, among other changes, to his original *Star Wars Trilogy* (1977-1983) through the special releases of the trilogy in 1997.[443] Ironically, many fans rather flocked to the defense of the original versions out of a kind of nostalgia for the film's seemingly dated aesthetic.[444] The pop-culture value of the *Star Wars* franchise as a whole is indubitably bound up with some amount of nostalgia for a film era gone by; despite the immense technological advancements utilized in the production of Disney's *Star Wars* sequel trilogy (2015-2019), a considerable portion of fans either loved or hated the latest trilogy (and the prequel trilogy, to boot) for various other reasons not involving the vastly differentiated look provided by a whole new generation of filmmaking technology.[445] The rise and fall of *Star Wars* in pop-culture fandom shows that the advance of technology itself is no sure bet that any media product will necessarily prove better or more successful, although the commercial production of media suggests that this idea is an implied notion.

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[443] Mendelson, "20 Years Ago."

[444] Kielty, "25 Years Ago."

[445] Schwartzel, "Disney Disturbs the Force."

In commercial media and media art, some advancement in technology or the advent of entirely new technology might come along that may achieve an artist's particular vision more efficiently or in a clearer way. The concept becomes better expressed, not changed wholly as a result of a shifting media landscape. Certainly, exceptions are almost always extent when produced with regard to the technology of the time rather than made as best as can be done in the face of that era's technological limits, although the limits of technology at any one point in time are almost certainly only perceived as such in retrospect, relative to the advent of newer developments. Even advances in film technology developed since, for example, the Danish filmmaker Carl Theodor Dreyer's film *The Passion of Joan of Arc* (1928) would not make it a better film today if re-envisioned with modern film technology. Any reboot or revision of such a film, through the addition of sound, color, CGI, or some other considerable advancement in film's technological conventions, would likely put a bad taste in the mouth of many a viewer and critic, the reboot rendered a monstrous false idol of superficial worship of technology for its own sake at the expense of artful cinema. The disaster that is the Hollywood reboot formula has proven a calamitous genre in its own right, made possible only by a ceaseless parade in praise of blind technological idealism.[446]

Because demos are tied up with the hard limits of their technology, they avoid working from the implied notion of "infinite digital flexibility," as Botz puts it, of media art and, I add, commercial media, which I suggest also works from the notion of infinite technological flexibility, with as much reliance on computer hardware advancements and other hard tools of production, such as the camera, if not more, as on the software-enabled digitization so common

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[446] Barnes, "The 30 Worst Remakes in Hollywood History." See also Chacksfield, "Worst movie remakes."

to contemporary filmmaking.[447] This arbitrary notion which seems to so unquestionably equate the advancement of technology with the betterment of art and commercial media is also of practical concern. The constant production of technology is extremely labor-intensive and environmentally harmful. The now conventional and expected marketing promises of ever more visually enhanced imagery rely on the exponentially accelerating invention of new computer hardware, particularly graphical- and central-processing units (GPUs and CPUs), the development and use of which create an immensely hazardous footprint on the environment. [448] As such, the relationship between technology and concept in any work proves not only a matter of aesthetics but also one of ethics. Perhaps aesthetics and ethics have always been integrated from the earliest history of representation, at the soonest point in which a cave painting, statue, or other image positioned its viewing subjects in relationships governed principally by relations of power.

Botz states that media theorist Friedrich Kittler's media materialism is a core component of demoscene aesthetics.[449] Media materialism applies "to the common law of the demoscene to use accessible, standard customary hardware."[450] As such, demoscene aesthetics foregrounds the accessible, not the technologically-reliant potential, with all its conceptual misguidance and environmental waste. Demoscene aesthetics instead focuses on creation by means of the attainable, which is no less labor intensive yet still practical and creatively demanding. Of further note, on media materialism as an essential element of demoscene aesthetics, Botz posits Kittler

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[447] Carlsson, "Demoscene Theory With Doctor Botz."

[448] Regarding Nvidia GPU effects in particular, see Koski, "Nvidia Founders' Edition GPU."

[449] Carlsson, "Demoscene Theory With Doctor Botz." For more on Kittler, see Kittler, *Literature, Media, Information Systems*.

[450] Carlsson, "Demoscene Theory With Doctor Botz."

might likely argue that demoscene aesthetics "overcomes the frustration of 'media Platonism.'"[451]

The demoscene is inherently subversive, and media scholar Anders Carlsson writes that it has extolled from its very beginning "the right to copy."[452] Indeed, the demoscene began early on in the 1980s amidst the "cracker" subculture, in which programming desperados illegally copied and distributed games as computer gains first started gaining popularity.[453] The intellectual property bandits would often leave their marks by replacing the developer's name with their own trademark "signature."[454] Creative intros to cracker projects, or "cracktros," evolved into the novel form of the demo by the late 1980s, with the Commodore 64 game console becoming the primary platform for making demos from 1985 through 1989.[455] Long-running demos, called "mega-demos," developed alongside subsequent technological advancements and extensions to cracktros, introducing "a large, long-running demo in which demo parts were linked together with routines; while an effect was shown on the screen, the next part was already loading."[456] For Botz, a non-digital comparison to demos is Graffiti, which, like the demoscene, aims for freedom by breaching barriers, including legal ones, though at the expense of its own instated restrictions.[457] Graffiti enacts the right to adorn the walls of urban space in the name of artistic

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[451] Carlsson, "Demoscene Theory With Doctor Botz."

[452] Carlsson, "Demoscene Theory With Doctor Botz."

[453] Beregi, "Demoscenes," 250.

[454] Beregi, "Demoscenes," 250. Beregi states on this page, "the name of the developer was … often supplemented or even substituted with a simple text indicating the year of the cracking and the pseudonym of the cracker (e.g., CRACKED 1984 BY ANTIRAM)."

[455] Beregi, "Demoscenes," 250.

[456] Beregi, "Demoscenes," 251.

[457] Carlsson, "Demoscene Theory With Doctor Botz."

freedom even though it is self-limiting, unable to escape its own conventionalized styles and hierarchical ranking of writer artists.[458]

Two works stand as prime examples of self-reflexive commentaries on the act of seeing (and, by implication, what is seen): Chris Marker's film *La Jetée* (1963) and the demoscene title *Linger in Shadows* (2008). *La Jetée* is a French New Wave short film "photo-novel" which tells its story through successive black-and-white still frames.[459] Film critic Johnathan Romney suggests that the film self-reflexively addresses "persistence of vision," or the illusion of motion.[460] For Romney, the film criticizes the objective notions of time and motion related to the very nature of cinema.[461] Demoscenes are a kind of "interactive art[,] … graphical showcases that oftentimes allow for no interaction whatsoever but instead serve as virtual portfolios and tests for what [designers] can accomplish with some crafty programming."[462] *Linger in Shadows* allows the player to view the demo or pause it in order to interact with the camera and view otherwise hidden parts of the environment, even altering some details.[463] Like *La Jetée*, *Linger in Shadows* is self-reflexive, drawing awareness to preconceived notions of the video game medium through the negation of its most conventional properties (in this case, action), but it also foregrounds a precarious border between interactivity in film and the act of looking in games. Additionally, qualities coterminous with photography and video games (e.g., resolution, pixel, the capturing process) should be critiqued along this border.

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[458] Carlsson, "Demoscene Theory With Doctor Botz."

[459] Romney, "*La Jetée*: Unchained Melody."

[460] Romney, "*La Jetée*: Unchained Melody."

[461] Romney, "*La Jetée*: Unchained Melody."

[462] Roper, "Linger in Shadows Impressions."

[463] Roper, "Linger in Shadows Impressions."

Figure 10. "*Linger in Shadows* (2008)"[464]

Figure 11. "*La Jetée* (1963)"[465]

In this scene, the couple walks through a natural history museum, enraptured by their encounters with the animals on display and also enraptured by one another's genuinely awestruck gazes. Romney observes that this scene is "prompting us to question whether these still images tend to evoke animation in dead beings or to reduce living creatures to deathly stasis."[466] I think Romney's question can be extended into a more explicit analogy about video games and film. While not living things, these immersive media vividly stir users' imaginations, occupying time, interest, and devotion as if the characters and worlds represented are living

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[465] Marker, *La Jetée*. Image from film writer Debbie, "La Jetée: a 28 Minute."

[466] Romney, "*La Jetée*: Unchained Melody."

entities. This experience is not unlike the gaze of curiosity and wonder expressed by the pair in

La Jetée as they explore the museum.

A second analogy can be made in *La Jetée* between the protagonist's ocular apparatus

and the self-reflexive qualities foregrounded in demoscenes. The main character travels through

time using an eerie contraption that includes a mask over his eyes. It makes me think today of

VR headsets such as Microsoft's Holo Lens or Meta's Quest 2. Via the nature of VR's total

spatial immersion, the headset itself is completely hidden from the user (aside from perhaps

being felt while wearing it). In *La Jetée*, the viewer is confronted with the sight of the character's

time-traveling apparatus while at the same time being under the illusion of film's representation

through the fast movement of still images on a reel. As such, *La Jetée* is a self-reflexive critique

of its film's illusionistic qualities. Demoscenes similarly reflect on the productive base

underlying the illusion of visual representation in both video game and movie visuals,

particularly as films are becoming more digital.[467] In conclusion, self-reflexivity is among the

primary traits to be considered in both video game art and films. As technological advances in

both video games and cinema show no signs of slowing down, self-reflexivity should be

especially addressed in video games and movies that rely heavily on digital technology in their

production or ruminate on technology and the digital in their thematic content.

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[467] The importance of cinema's digitization is difficult to exaggerate. As Parkinson states, "digitization began transforming everything from shooting and post-production to distribution and exhibition from the late 1990s … and … [CGI] became even more crucial than stars to the crowd-pleasing event movies whose opening weekend box-office performance determined their commercial fate." This quote is from Parkinson, "Into the Second Century," 284.

Conclusion: Playing Seeing: Subversion through Gamic Reflexivity[468]

Where is *Rashomon* in games? Returning to the question with which I introduced this

dissertation, I argue that one way in which video games can pursue the multiplicity of

perspectives at work in Kurosawa's masterpiece is through self-reflexivity. Borrowing

Galloway's term "gamic" in referring to qualities apparent and oftentimes essential in video

games, [469] we might consider the notion of gamic self-reflexivity or, for short, gamic reflexivity.

Gamic reflexivity is represented through any means which produces a knowledge effect or, in

other words, is transparent regarding the modes of production at the base of the video game

medium. Inasmuch as video games are mass texts forming a large part of visual culture, gamic

reflexivity should include both the configurative base of games as well as their surface-level

visuals. The field of visual studies offers tools for analyzing video game visuals through a

synthesis between game studies and approaches traditional to other visual arts fields such as art

history and film studies, albeit without overreliance on any one particular system. Attention

might be brought to an increasing number of photo and video simulations within video games,

such as with diegetic photography modes in games like *Pokémon Snap* [1999]), or non-diegetic

photography capabilities like taking a screenshot. The graphical prowess of modern video games

enables far broader player experiences than the competitive. Many MMORPGs, for instance,

such as *Final Fantasy XIV*, place great emphasis on visual spectacle. Players can enjoy simply

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[468] This chapter title is a play on Mitchell's chapter title "Showing Seeing: A Critique of Visual Culture." See Mitchell, "Showing Seeing."

[469] Galloway, "Gamic Action, Four Moments, 1-38." This definition of "gamic" as used throughout Galloway's work is not explicitly characterized this way, but I think this characterization of the term can be implied through his emphasis on the materiality of games. He states on page 3, for example, "[i]nstead I embrace the claim, rooted in cybernetics and information technology, that an active medium is one whose very materiality moves and restructures itself … [.]"

exploring an environment or socializing with friends whilst watching the sun go down in their favorite zone.

Additionally, video games often tie their progression mechanics strongly to visual cues over narrative ones or utilize cues reliant on other senses. For example, in *The Witcher 3: Wild Hunt*, the player can activate "witcher sense" when trying to solve a mystery in order to make clues in the landscape appear in a fluorescent red. Speaking with non-player characters (NPCs) can aid in this, but, unlike in a literary mystery, the resolution is not found in piecing together various pieces of information from character interviews and other interactions but rather through direct visual evidence, often in the form of these kinds of breadcrumb trails. Indeed, as symptoms of visual culture, video games are important in instructing the ways in which vision constructs our sense of self and world.[470]

Myst, Shenmue, *Ico* (2001), *The Night Journey* (2007), *Flower* (2009), *Journey* (2012), *Gone Home* (2013), *Proteus* (2013), *Mountain* (2014), *Everything* (2017): Each of these games in one way or another eschews conventional conceptions of video games. The environment in *Shenmue*, for Galloway, morphs poetically with the flux of seasonal time.[471] *Gone Home* is a walking simulator in which the player pieces together a narrative web using environmental traces of the player-character's missing relatives.[472] Bogost describes *Everything* as a metaphysical experiment about being all manner of animals and things throughout the universe.[473] In closing, I

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[470] Mitchell, "Showing Seeing," 356. On this page, Mitchell states, "visuality … [is] not just the "social construction of vision" but also the visual construction of the social[.]"

[471] Galloway, "Gamic Action, Four Moments," 10.

[472] According to Wiktionary, a "walking simulator" is defined as "[a]n adventure game focused on gradual exploration and discovery through observation, with little in the way of action." The entry also notes that the genre is sometimes referred to in a derogatory way. See "Walking simulator."

[473] Bogost, "The Video Game That Claims." See also Bogost, "You Are Mountain," on the unconventionality of *Mountain*.

examine video games which either fail to fully conform to conventional game design or intentionally subvert it. In particular, I examine types of games that might be categorized as hybrids between games and art, perhaps better conceived as game art. Art historian and game scholar John Sharp states that the defining feature of game art is "the appropriation of the tools of the game industry for artistic purpose." [474] I also examine game mods.[475] Like the demoscene, works among these categories represent novel and revitalizing endeavors that reconceptualize taken-for-granted notions of what a video game can be. Contrary to most video games skewed toward an idealized notion of scientific realism, these video games are more akin to demoscenes and New Wave cinema, self-reflexive in expression and antithetical to three-dimensional mimesis as a privileged aesthetic of visual culture.

To better understand video games that counteract mainstream norms one way or another first requires considering and perhaps questioning what video games are conventionally understood to look and play like, and these engagements likewise first require a reestablishing of what a game is and what it means to play one. Stable definitions of "game" and "play" prove to be problematic. Dutch Anthropologist Johan Huizinga provides probably the most relied-upon definition of "play" in the following summary of its characteristics in *Homo Ludens* (1955):

> Summing up the formal characteristics of play we might call it a free activity standing quite consciously outside "ordinary" life as being "not serious", but at the same time absorbing the player intensely and utterly. It is an activity connected with no material interest, and no profit can be gained by it. It proceeds within its own proper boundaries of time and space according to fixed rules and in an orderly manner. It promotes the formation of social groupings which tend to surround themselves with secrecy and to stress their difference from the common world by disguise or other means.[476]

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[474] Sharp, "Game Art," 23.

[475] Galloway, "Countergaming," 107. Here, Galloway defines a mod "a video game that has been modified or otherwise hacked by a user or group of users."

[476] Huizinga, "Nature and Significance of Play" 13.

Playing tennis suits Huizinga's definition just fine. A tennis game takes place on a defined court space with clear boundaries declaring a ball "out," takes place for a fixed time according to a specific ruleset which specify the duration of the game, is governed by clear and strict rules—oftentimes with a third-party referee ruling over their application—, has no aim outside of the winning of the game by each contestant, and stands apart from regular life as a recreational activity. Chess and other tabletop and board games easily serve alongside sports as other prime examples.

The universality of Huizinga's definition of play is evident in how well it appears to also meld with many video games, despite the timing of his writing long before the arrival of the computer. During a deathmatch game in *Goldeneye 007*, players voluntarily play within the limited space of a 3D map for a particular duration (either a set amount of time or until a player scores a prescribed number of points), according to rules set by the game via its software (defining certain parameters such as movement speed, weapon selection, and the physics of movement and gunplay), and having the aim of fun alongside a feeling of tension inherent in both striving for virtual survival as well as achieving supremacy over other players in a way distinctly separate from ordinary life. Despite the astounding variety of video game genres, works as visually and mechanically distinct from one another as *Super Mario Bros.* and the multiplatform third-person puzzle-action *Katamari Damacy* (2004) can fit Huizinga's concept of play with remarkable ease. Yet the fact that big-budget cinematic video games can stand alongside the often prosaic design of chess in this play categorization seems potentially contradictory.

Despite the strikingly similar fashion in which basketball and the isometric strategy PC game *StarCraft* fit Huizinga's seemingly simple play formula, difficult differences between the

two remain. Are *StarCraft* and basketball really so alike, even if they both fit Huizinga's concept

of play? The stark differences between the two, so clearly on display in the tense bout over

whether or not video games can rightly be donned sports, at the very least with the differentiating

moniker of "e-sports," should not feel so troublingly distinct if play uniformly perfuses all

manner of games, even being bound up with culture at large.[477] Yet while reason seems to

support the universality of Huizinga's definition when each criterion is strictly considered,

intuition tends to support otherwise. Playing a modern video game can feel worlds apart from

non-computer-based games—although an exception may be made with strictly computerized

forms of non-computer games like chess (*Chess Ultra* [2017]) or basketball (*NBA 2K21* [2020]),

and, even then, enough computer-specific enhancements to gameplay or visuals may well make

them stand apart enough from their analogous twins to warrant a new categorization of

experience.

As mentioned previously, Juul suggests that the key component distinguishing video

games from other types of games and warranting renewed conception of games as video is the

screen: "screens somehow send the right signals."[478] And just like with film, the representation

of a video game through the screen is essential to video game ontology and the critique of games

as a whole. Traditional analyses of pre-computer games, including those using the application of

Huizinga's definition of play, must give way to new conceptualizations of what a video game is

and how it should be approached. Thus, I argue that play cannot be universally defined. The play

concept does not universally permeate painting, tabletop games, and video games, among other

categories. Some of the most vital distinctions between media are indeed caught up with the

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[477] Burton, Farnand, and Gorb "Point-counterpoint: Are eSports."

[478] Juul, "The repeatedly lost art."

material technology which produces the work, including its material base as well as the creator's

technique in manipulating the base. Certainly, the integration of the game with the screen

necessitates an approach to video games that places the technology and the technique of its

application in the foreground and prioritizes these parts above the surface-level play experience,

as defined by gameplay mechanics or even visually. To sum up my earlier examination of the

gamic apparatus, the implication of the screen is fundamental to video game ontology and so

obligates the consideration of film theory and other visual approaches in video game analysis.

Further complicating the identity of video games is their dual consideration as both game

and art. Video games were long considered the former, and their labeling as the latter is presently

contested. The categorization of video games as art has been gaining ground in two ways. First is

the advent of video game technology as a platform for computer-based or digital art, even as

display pieces in art exhibitions. Second is the historical consciousness of canonically classic

games that have stood out as important in some way for the history of the medium at large.

The conventionalization of video games as a popular text in visual culture has opened up

avenues for a counterculture of gaming, not unlike how French New Wave films developed in

response to Hollywood cinema. For Galloway, the video game avant-garde movement has come

to be regarded by some as "countergaming," represented by such developer artists as Jodi, Brody

Condon, and Cory Arcangel, among others.[479] Galloway argues for considering film theorist

"Peter Wollen's seven theses on countercinema" as a model grammar for interpreting avant-

garde video games, a grammar which opposes traditional, or what might be called Hollywood

cinema, with those of "art film," or countercinema, a category within which I would also include

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[479] Galloway, "Countergaming," 109.

Soviet cinema in relation to my previous chapter discussing Soviet montage.[480] Galloway applies

Wollen's countercinema theses for the conceptualization of avant-garde video games.[481] The

revised list, boiled down from seven theses to six, includes 1) "*Transparency versus*

foregrounding," 2) "*Gameplay versus aestheticism*," 3) "*Representational modeling versus*

visual artifacts," 4) "*Natural physics versus invented physics*," 5) "*Interactivity versus*

noncorrespondence," and 6) "*Gamic action versus radial action* [all emphases Galloway's]."[482] I

believe all six theses break the mold of realistic representation embedded in three-dimensional

art since the emergence of linear perspective during the Renaissance.

Unlike the avant-garde movements found in visual art and film, wherein avant-garde

works subverted commercial works or those categorized as elite high art through disruption and

disconnection, one category of avant-garde video games involves a symbiotic relationship with

the gaming industry.[483] In fact, many "artist-made game mods" utilize "commercial game

engines," for instance as *untitled game* and *QQQ* utilize the *Quake* engine.[484] On the one hand,

this reliance on the commercial industry's technology seems antithetical to avant-garde cinema's

aversion to Hollywood commercialization, yet Galloway suggests that video games, as digital

objects, are ontologically amenable to modification in that "there exists a symbiotic relationship

between mod artists and the industry in a way not seen in previous avant-garde movements."[485]

While this relationship is perhaps helpful for independent game developers who stand to benefit

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[480] Galloway, 109-10. See Wollen, *Readings and Writings*, 80-89.

[481] Galloway, 124-25.

[482] Galloway, 124-25.

[483] Galloway, 113.

[484] Galloway, 113.

[485] Galloway, 112-13.

both from the game engine advances made my industry titans as well as from the opportunity to have their mods accessed by audiences typically reserved for big-budget titles, this relationship also threatens to create greater distance between developers and potential audiences if their mod may not prove as commercially successful as, for example, *Half-Life*. As such, it may be better to exclude commercial mods in subversive categories of artworks and focus on video games focused around more critical messaging than those which serve entertainment. Galloway credits "artist Paul Johnson, who creates his own game systems (not to mention his own hardware) … [and] artists like Cory Arcangel [who] code all their software from scratch with little reliance on any existing commercial game" as examples of such critical artist works.[486] For Sharp, Arcangel's *Super Mario Clouds* (2002) subverts the power of the gaming industry through the release of "the means of production as a web-based tutorial."[487] Arcangel produced the project in part by hacking *Super Mario Bros.*, in effect turning "the game into, all at once, a landscape painting, a piece of video art, and a DIY hacking project."[488]

New York-based artist Federico Solmi's *The Great Farce* (2017) is another example of a subversive work that does not quite qualify as a video game in the usual sense of the word yet nonetheless uses video game technology toward its unique expression. The work is a "video project" that "re-uses game engines."[489] According to a description by B3, the work "pokes fun at how bedazzlement can supersede historical accuracy, while calling attention to the nexus of myth and legend, actuality and absurdity."[490] Solmi's project clearly escapes categorization.

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[486] Galloway, 113.

[487] Sharp, "Game Art," 35.

[488] Sharp, 35.

[489] Bittanti, "Game Art: Federico Solmi's." See also "The Great Farce."

[490] Bittanti, "Game Art: Federico Solmi's." The B3 description is quoted in Bittanti's article.

However, its use of in-game engines to display conventional game graphics responds to the functions of images found in video games as well as found across visual culture at large.

In this work, Solmi has created a bacchanalian vision of a spectacle-fueled society taken to the extreme. While not a video game per se, I think it is a prime example of game art as characterized by Sharp.[491] While *The Great Farce* is officially classified as a video installation, it relies on a game engine for its visuals.[492] According to Solmi, hand-painted image scans are layered over 3D character and environment models, animating puppet characters "through motion capture and computer scripts rather than strings."[493] Each scene is recorded through the use of an in-game camera from the first-person perspective, "giving the perspective of a director or voyeur."[494] The mixture of its highly stylized video game aesthetics and the absurd revelry of the nationalistic myths it depicts signal the work as a metaphor for U.S. political idealism.

Displayed in 2017 from the Schauspiel Frankfurt in Germany for the B3 Biennial of the Moving Image, *The Great Farce* is a multi-channel video installation which renders the nostalgic and idealistic rhetoric of a U.S. political conservatism taken to an absurd end, where, according to the artist's description, "[r]eality has become an eternal amusement park."[495] In his work, Solmi envisions the world as an endless spectacle, where "[e]pic battles, great adventures, and lavish ceremonies are staged as reenactments of historic events."[496] Here, leaders become

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[491] Sharp, "Game Art," 23. Again, for Sharp, game art is characterized by "the appropriation of the tools of the game industry for artistic purpose."

[492] "The Great Farce."

[493] "The Great Farce."

[494] "The Great Farce."

[495] "The Great Farce."

[496] "The Great Farce."

"idolized celebrities," become mad with power, and seek control over a false world.[497] History is

revised and celebrated endlessly with no conceivable border between history and entertainment,

where "carnival rides transform into historic monuments, to be toppled like Don Quixote's

windmill giants."[498] In a series of stills, one may find a colorful arrangement of carnival rides,

colonial ships, revolutionary soldiers, a Native-American ceremonial display, a neon-lit display

of the American flag, and former U.S. President Donald Trump riding a merry-go-round

encircled by a sea of adamant fans.[499] The message of *The Great Farce* echoes the sentiment

found in several of Solmi's other works, including *The Ballroom* (2016) and *The Brotherhood*

(2015-2016), through which, paraphrased from the description found on the webpage for the

work, history is a fabrication uncritically and absurdly conceived and perpetuated in the guise of

a privileged perspective which serves those in power.[500]

The most recent video game I have come across that may well fulfill the search for

Rashomon in video games has to be Adam Robinson-Yu's (Adamgryu) multiplatform adventure

game *A Short Hike* (2019). Following a positive experience with the game, reviewer Stuart Gipp

opines that "*exploration* [emphasis the author's]" seems to form the crux of video games

entertainment.[501] This opinion surprised me precisely because the graphical layout of *A Short*

Hike consists of a "semi-isometric 3D" landscape.[502] As noted earlier in this dissertation, the

isometric perspective in video games tends to favor gameplay styles that center on power and

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[497] "The Great Farce."

[498] "The Great Farce."

[499] "The Great Farce."

[500] "The Brotherhood."

[501] Gipp, "A Short Hike Review."

[502] Gipp, "A Short Hike Review."

domination. I think *A Short Hike* upends such conventions. As Gipp explains, you play as a little bird character named Claire on a quest to locate a phone signal at the peak of a mountain, yet you are "hindered by Claire's lack of flight ability and energy."[503] Gipp goes on to explain that you do increase your skills and abilities through the accomplishment of various quests and through exploration of the environment to come closer to your ultimate goal, but you do so through various pleasant "distractions" around the island.[504] "You'll be able to meet (and race against) marathon runners, grab a fishing rod, take in a quick game of volleyball, trade a kid's toy shovel for a real one (and dig up coins and treasure chests with it)," Gipp explains.[505] What stands out to me the most about this game is the quotidian pleasantries and exploration to be enjoyed along the way. Gipp uses the word "freeform" to describe both its story and gameplay.[506] The goal of getting to the top is there, but it does not define the experience.

I want to conclude with some points from my MATX competency project, my hypertext Twine story *Moonvale* (2018), which I think in its own ways exemplifies some of the avenues through which video games can eschew their conventional forms.[507] *Moonvale* is a hypertext short story which I wrote using Twine, a platform for writing hypertext stories.[508] Poet and digital media scholar Nick Montfort defines hypertext as "a system of fictional interconnected texts traversed using links."[509] Murray characterizes the "postmodern hypertext tradition" as a

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[503] Gipp, "A Short Hike Review."

[504] Gipp, "A Short Hike Review."

[505] Gipp, "A Short Hike Review."

[506] Gipp, "A Short Hike Review."

[507] Longaker. "Competency: Moonvale."

[508] Twine. http://twinery.org/.

[509] Montfort, "The Pleasure of the Text Adventure," 12.

tradition which "celebrates the indeterminate text as a liberation from the tyranny of the author and an affirmation of the reader's freedom of interpretation."[510] Hypertext is a model art form for going against the conventional grain of typical art forms and, despite being a text-based rather than visual artform, is similar to video games because of its navigational attributes. As hypertext author and theorist Stuart Moulthrop explains, via Murray, hypertext "rejects authoritarian, 'logocentric' [i.e., truth-affirming] hierarchies of language … and seeks instead systems of discourse that admit a plurality of meanings [previous brackets Murray's]."[511] Unlike with video games, however, hypertext does not constrict the user's choices, forcing the player to abide by one or other optimal choices if they wish to avoid some kind of penalty or setback. Instead, hypertext lets the user freely choose their path, with each possibility conducive to its own distinct expression rather than operating as a game interaction dedicated toward the incremental gain or loss surrounding a particular goal. I wrote *Moonvale* with these points in mind, and I believe that titles such as *A Short Hike*, among other unconventional video games, reflect the hypertext form in this way.

  Moonvale is a circular narrative about a detective trying to uncover a mystery in a small town. In following the spirit of the hypertext tradition, I employed stream-of-consciousness in parts of the writing, provided branching paths that provide no sense of which path or action is best to choose, and employed a cyclical arc that fails to provide any sense of closure to the central mystery. The mystery itself is alluded to in cryptic ways, allowing the user to interpret the work's meaning for themselves. This feeling evokes what Murray characterizes occurs in

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[510] Murray, "Agency," 133. Worth noting is a quote by Murray on page 132 in which she characterizes the hypertext form: "Full of wordplay and indeterminate events, these labyrinths derive not from Greek rationalism but from poststructuralist literary theory and are inheroic and solutionless."

[511] Moulthrop, "Containing Multitudes," 1, quoted in Murray, 132-33. See Sundén, "Cybercultures" for an accessible web reference to Moulthrop's quote cited by Murray.

hypertext, as she discusses Moulthrop's hypertext work *Victory Garden* (1992): "Walking

through a rhizome one enacts a story of wandering, of being enticed in conflicting directions, of

remaining always open to surprise, of feeling helpless to orient oneself or to find an exit, but the

story is also oddly reassuring. … The fact that the plot will not resolve means that no irreparable

loss will be suffered."[512] If video games can emulate this feature, they can better dispel the

illusion of certainty within a rule-based system and more artistically express the contingency of

reality, a feature already alluded to by various degrees through the ambience act.

While hypertext is text-based rather than visual, this aspect of navigational freedom and

slow-paced, explorative wandering is akin to unconventional video games like *Mountain*, among

others. This quality stands in opposition to the "authoritarian" or "logocentric" (to use

Moulthrop's descriptors)[513] form of many video games, including isometric games like

StarCraft, whose optical schemes imply a strict manner of play. *StarCraft* leverages every bit of

information for efficient use within the strict, complex logic of the game's economy of

production and destruction. The use of images in hypertext stories also introduces questions

surrounding the relationship between image and text. Most hypertext stories do not use images of

any kind, while others do.[514] I implemented spare imagery in *Moonvale* to invoke images that at

once contribute to the world but also leave up to interpretation how the images relate to the

characters, town, and larger mystery.[515]

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[512] Murray, "Agency," 132-33. Here, Murray cites the 1992 edition of *Victory Garden*. See Moulthrop, *Victory Garden* (2003). Murray references Deleuze's notion of the "rhizome" on page 132 to frame this analysis. Murray describes Deleuze's rhizome as a "tuber root system in which any point may be connected to any other point." See Deleuze and Guattari, *A Thousand Plateaus*.

[513] Moulthrop, "Containing Multitudes," 1, quoted in Murray, 132-33.

[514] Murray, 133. See as an example Scholes' hypertext adaptation of Robert Coover's *Briar Rose*. Coover, *Briar Rose*. The web address I had previously recorded in my reference entry for this work is no longer working at the time of this writing.
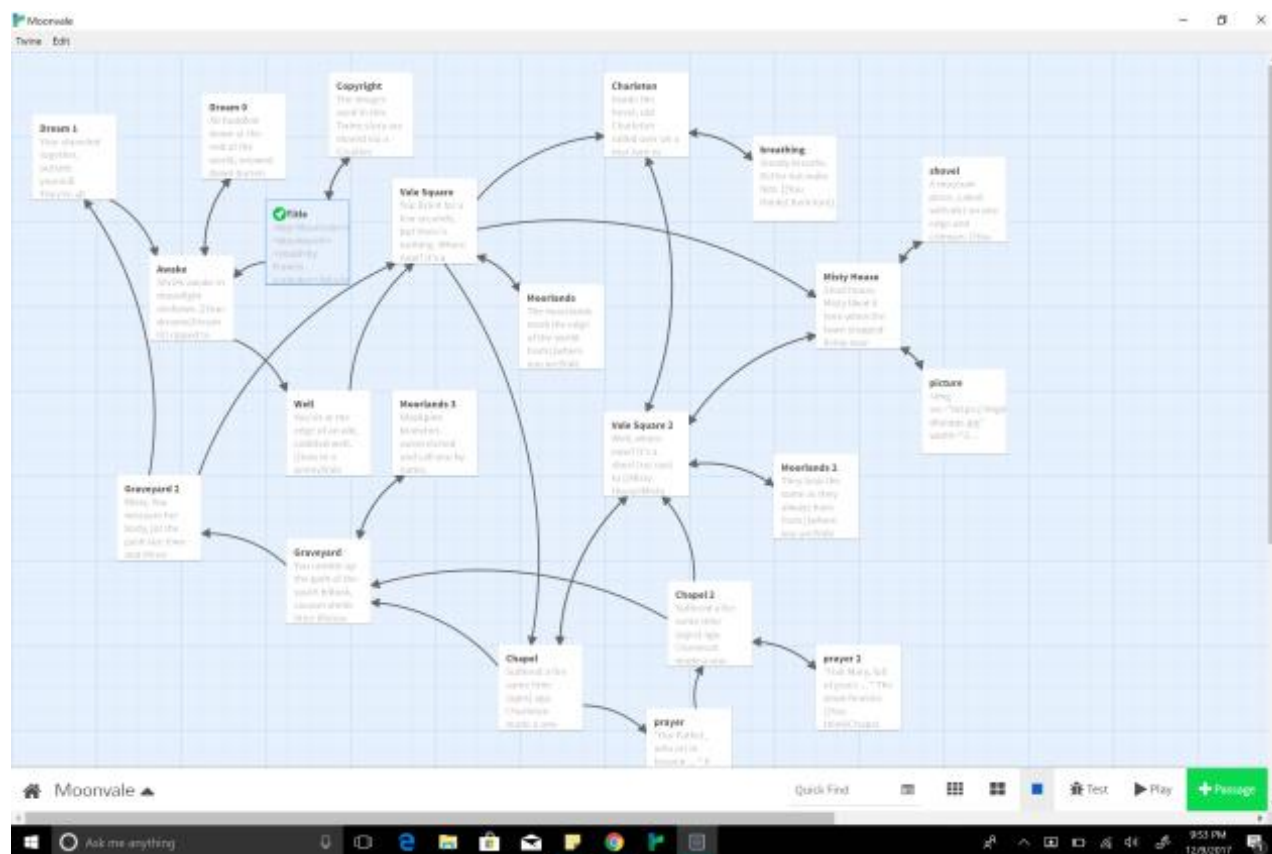
Figure 12. "*Moonvale* (2018)"[516]

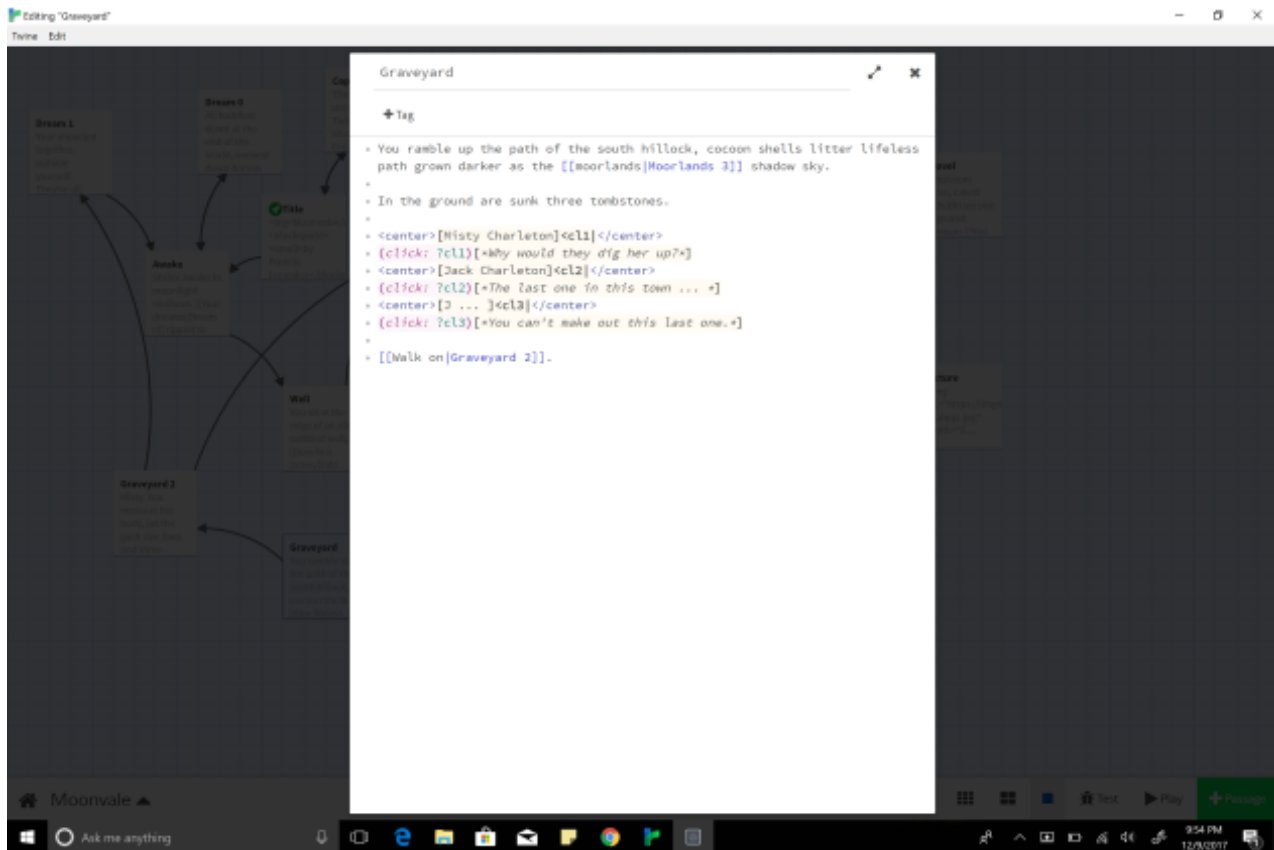[516] Longaker, "Competency: Moonvale." My screenshot using Windows.

Figure 13. "*Moonvale*"[517]

In chapter 4, I examined how demoscenes foreground their productive base. In this final chapter, I extend this discussion to video games with the notion of gamic reflexivity. As video games and digital culture at large expand their influence on society, it is increasingly important for artists and designers to consider how they can implement self-reflexivity in their own digital works. The material makeup of technology today is becoming more hidden. Smartphones are becoming smaller and sleeker yet more powerful. Wires are no longer as prevalent as wireless tech is taking over. A potent example of this transformation can be seen in the photo gallery exhibition *Gamers* by artist Todd Deutsch. Documenting "Local Area Network (LAN) parties in suburban Minneapolis and St. Paul," Deutsch captures in several photographs the size and

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[517] Longaker, "Competency: Moonvale." My screenshot using Windows.

multitude of hardware components like monitors, game consoles, and television sets, as well as the immense wiring connecting everything together.[518] I well remember the technological footprint of video games growing up in the 1990s and early 2000s, and Deutsch's gallery captures a vital historical picture of video games' visible materiality which stands in stark contrast to the increasingly hidden makeups of recent technologies. Thus, self-reflexivity in gaming, as well as in cinema, remains vitally important moving forward for artists and scholars.

Through my experience creating *Moonvale*, I learned some basic coding necessary to edit my story through the Twine platform, and this experience gave me a sense of the technical complexity involved in creating a digital work. I wonder if this complexity is not further removed from the experience of navigating the finished form when it comes to the user's point of view, implying a greater distance between creator and user than that of media less technologically complex than video games and film. While I did not render visible the algorithmic base of *Moonvale* for the user, I became much more aware of it nonetheless while using the technical tools to make the story. I did, however, as explained above, engage with the history and critical conceptualization of the hypertext form as a reference, a form that is historically embedded in the rise of multiform stories as well as electronic storytelling. These kinds of engagements can lead to a self-reflexive awareness of the work via an emphasis on its productive base, which can provide the designer or artist an opportunity to somehow transmit that self-reflexive awareness into the content. One way brought this out in *Moonvale* is via an accompanying explanatory article posted on my MATX web portfolio discussing the hypertext genre and how it inspired my own story, from which some of this concluding material is

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[518] Deutsch, *Gamers*.

derived.[519] Thus, my evaluation of self-reflexivity in video games and film, as in my own hypertext project, and my engagement with the historical contexts surrounding them has shown self-reflexivity to be a key area of focus for the application of visual studies to technologically complex media like video games.

[519] Longaker, "Competency: Moonvale."

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Vita

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