

Creating Critical Gameplay Design

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ABSTRACT

This paper discusses the critical gameplay design project and its newest developments. After being exhibited in five national and international venues in 2009-2010, the project has been reconstituted with 3 new games that critique specific aspects of standard gameplay. This short paper reflects on the experience of the exhibition and the design heuristics gathered from them. The paper discusses the three axes of creating Critical Gameplay Games, content, process and scale. It is provided as a resource for researchers making polemic games, including but not limited to persuasive games, advergaming, and critical gameplay. It is also useful to people involved in game jams or other intensive, time restricted game-making activities.

Categories and Subject Descriptors

J.5 [Arts and Humanities]: Arts Fine and Performing – computer games as educational spaces

General Terms

Design, Experimentation, Human Factors, Theory

Keywords

Critical design, game design, Critical Gameplay, Game process workflow, rapid game development, game art

1. INTRODUCTION

The Critical Gameplay project endeavors to demonstrate a distinct brand of design anthropology and art production through the design, development and exhibition of critical games. Critical games are games designed to critique standards in gameplay experiences. The project was initiated in March of 2009. The games produced as part of the project have been exhibited in Brazil[1], Greece [2] and several venues in the United States[3,4]. The project has also been positively referenced in a forthcoming book on Ethics and Game Design [5] and in various dialogues on the Internet.

The critical gameplay games are designed as short, simple experiences. They are intended to be the computer-gameplay

equivalent of mini narratives like Aesop's fables or children's allegories. They provide singular, pointed reflection on one experience in conventional play. Instead of employing narrative to provide critique, each game's gameplay is the critical content.

When the project started it endeavored to be an artistic experiment in three primary axes. These were content, scale and process. The content of each game precipitated from observations about traditional gameplay and its critique. Each project was scaled to be a small, intense experience harmonizing with each of the existing Critical Gameplay games, but distinct in its aesthetic and voice. The process of design and development was an intense, singularly immersed rapid application model. Each game was created in at minimum a day, and at most 10 days.

2. BACKGROUND

The concepts of the Critical Gameplay project are derived from principles in critical design. Critical design is best recognized in the work of London based design firm, Dunne and Raby [6] whose practice is actively perpetuated at the Royal College of Art in London. The games are also informed by research by the author in the concept of Software Philosophy, research which complements the newly formed discipline of Software Studies[7,8] and Critical Computing[9]. Integral to all of these research areas is the notion that design may stimulate conversation and critique. Whether it is the design of an industrial product or a piece of software, each of these areas of study seeks to recognize the rhetoric inherent in designs. Similar to a product's design, software may effect the way we arrive at a solution, the way we view ourselves, or the way we interact with each other[10].

Entertainment software is not immune to these tendencies [11]. It is, perhaps, even more susceptible to them. Computer games in particular are part of a rich cultural space that is well formed and evolving. As such, it is crucial to routinely evaluate the characteristics of the game products we create. Critical gameplay does so, not by examining the potential value in entertainment, but by evaluating the values in the games themselves. It is a design practice focused on identifying the characteristics of common gameplay, exposing some the values attached to that gameplay, and designing alternative gameplay based on other values. It is intended as a point of reflection, raising critical awareness of design assumptions in standardized gameplay.

The research and activities around critical gameplay and its compliment critical play are increasing [12]. This brief overview provides the researcher with exposure to three new critical gameplay games and the process through which games in the Critical Gameplay project were created. This information should be useful to designers, developers, and artists engaged in both critical design and high-intensity, rapid game-making. It serves as

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a collection of heuristics learned in making games that offer polemic content. Other developers of polemic media, such as makers of persuasive games and advergames, may also find this research valuable.

3. CONTENT

The content of the Critical Gameplay games works to subvert the dominant assumptions in contemporary video game experiences. Each game addresses one very specific theme, as a means of demonstrating a single concept. The content of the games is largely based on the concept of software philosophy. Software philosophy claims that software contains biases passed on from the designer to the user of the software. In the case of entertainment software, these biases reveal themselves as prevalent gameplay mechanics. In the context of the project, gameplay mechanics are the actions made available to the player to accomplish their tasks and their results. Shooting, for example, is a gameplay mechanic, but so too are the mechanics of its result, typically a non-player character's death.

The original four games in the collection were named Wait, Bang!, Black/White and Charity (see figure 1). Respectively these games included the following content:

Wait is a game to critique the pace and flow of existing games. The player must wait for the world to reveal itself, and in so doing they earn points. The player must balance waiting and moving to perpetuate the game.

Bang! is a reflection on game violence and flow. Every time a player shoots a non-player character, they must review the fictive history of their lives. When a victim is shot, the player must endure a long photographic history of the victim's life.

Charity is a game to emphasize the rarity of cooperative play. The two players in the game must work non-competitively to pass the ball to each other, where the ball itself is the source of conflict, instead of the other player.

Black/White is a reflection on game stereotype. Every character in the game looks the same, but acts differently when the player moves closely to them. The player must discriminate between threats and non-threats, by using character behavior instead of appearance.

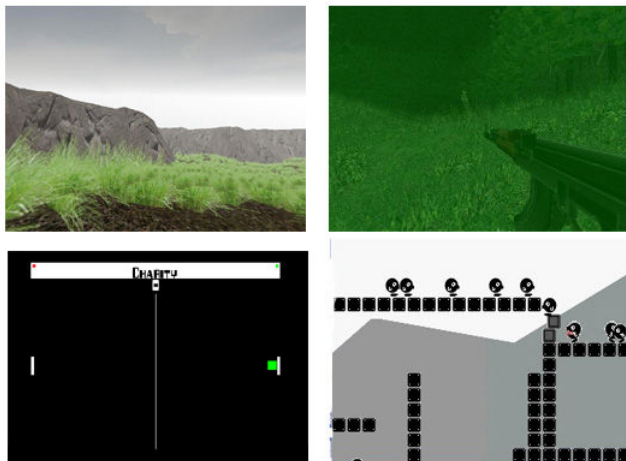


Figure 1: Wait (top left) , Bang!(top bottom), Charity (bottom left), Black/White (bottom right)

These four games are well documented in the previous publications[3,4].

Three new games were added to these aforementioned games. The first is a game that reflects on the capitalist ethic of collection in games. Instead of being rewarded for collecting coins, the player is weighed down by them. In this game, entitled Levity, the player must avoid coins to traverse the platform levels. It is designed to champion other perspectives on the world, incorporating simplistic elements of Buddhist detachment and renunciation.

The second of the next generation of Critical Gameplay games includes an additional reflection on violence. It inverts our typical relationship to violence as players. Instead of offering the opportunity to re-experience an historical event of violence, the player is given the opportunity to undo them. In Healer, the player must extract bullets from dead victims to undo the tragedy of historical massacres. In its first 15 minutes of gameplay, the player extracts bullets from victims of the highly controversial Nanking Massacre in China.

The third addition to the collection is a game called Simultaneity. Unlike other Critical Gameplay games, Simultaneity critiques the absence of an obvious game mechanic instead of its existence. Since much of the virtual world of computer games is based on the physical world and its rules, it seemed necessary to build a game that exploited the potential in solely computer-based play. The game is an action-puzzler, where the player must navigate multiple robots to various exits on the game screen. Each robot is controlled by the same set of keys, so a movement left moves all robots left. If any robot is damaged repeatedly by hitting walls or other robots, it will be destroyed. Points are awarded for getting robots through exits. Simultaneity is a reflection on the notion of simultaneous benefit, asking the player to think about consequence globally. It also serves as a pedagogic exploration into training players to think about simultaneous ramifications.



Figure 2: Healer (top), Levity (middle), Simultaneity (bottom)

4. PROCESS

Contemporary theory explains that process is an important aspect in the critique of creative enterprise. In the development of critical gameplay games, process is more than an explanation of the technical implementation and creative workflow. In this project, process severely manages outcome. As mentioned in the introduction, Critical Gameplay games are distinctly pointed in their critique. The games are designed to be a much focused implementation of single-minded concepts. As such, a distinct, single developer and designer model was used.

Traditional game projects employ multiple people to create the art, code and additional assets that comprise a game. Yet, if Critical Gameplay games are to accomplish their goal of successfully critiquing the traditional, it makes sense to employ a non-traditional process. As such the fundamental process model under which each of these games was created is as follows:

1. Concept repository created
2. Implementation details executed and iterated
3. Content pipeline established and iterated
4. Implementation executed

Each of the game concepts was excavated from a perpetually managed concept repository. The concept repository is simply a database table of game concepts, situations and gameplay verbs. All of the contributions to this repository come directly from the single developer/designer. When a new game is begun, the concept repository is used as the starting resource. This allows ideas to ferment, decanting only the strongest concepts from the collection.

Although not wildly distinct from the standards of large design firms, the concept repository supported a critical distance not routinely employed by creative projects developed by a single person. If for example, an idea resonated well, a single developer may jump immediately into its implementation. Instead, the repository preserved the idea and let it rest among other ideas until an appropriate amount of reflection on the idea had occurred. It also facilitated thematic confluence, allowing several simple ideas to converge into a single stronger concept.

The concept repository also helped support transitions in creative mode. Since mood, time, and abilities shift during a game development cycle, it is nice to be able to exploit the confluence of those factors. If, for example, there is only a 30 minutes for development/design time, time might best be used for depositing a new idea in the repository. In this model, a single person holds distinct roles on the project, so it is important to provide a space for storing the results of each of those roles. The concept repository acted as the working space for the designer and the archive of design product.

Once a game concept was selected from the concept repository, basic implementation details were outlined. Yet, unlike traditional game teams, the implementation environment was selected not by familiarity, but by affinity to the concept. Affinity was determined by iteratively evaluating game engines and programming environments for their efficacy in key alternate game mechanics. Wait, for example, was implemented in both Torque Game Engine and Blitz3D. Blitz3D was chosen because

the environment offered the easiest to implement and most aesthetically pleasing experience for fading elements in and out of a scene. The games in the project were implemented in Proccesing.org, Blitz3D, Unity3D, Torque Game Engine, Game Maker, Game Salad and JavaScript. Often, the key mechanic for a single game was implemented in 2-3 game-making environments before the final implementation was selected.

Since many of the mechanics are non-traditional, most solutions involved adapting the way the game-making program was designed to work to the intended mechanic. Healer, for example, employs a reverse shooting implementation (the extraction of bullets). Since many game engines employ collision detection, extracting was not part of the intrinsic engine design. As with many game development projects, a variety of creative solutions in implementation exposed specific biases in the way the software was designed to be used. These revealed software philosophies tended to strengthen the critical gameplay concept because the challenge of choosing an alternate mechanic accentuated the game engine's design philosophy.

After implementation was proven plausible and practicable, the content style and pipeline was established. Content style derived from themes in concepts. As is standard in professional creative design, specific color schemes, historical references, and related thematic threads were employed. The binary structure and aesthetic of Black/White for example, perpetuated the theme of the game by using two colors, with two frame animation, with two distinct non-player characters, and so forth.

More interestingly, to focus the critique, each game borrowed standards from the era being critiqued. Each game was designed to reference the artistic standard of implementation for the era referenced by the game. Since the games are designed to be distinct, content for the games was created using different software. The software was selected for its intersection of rapid content generation and fidelity to the chosen era. Bang!, for example, used low-poly models generated with 3D Studio Max, while the environment in Simultaneity used sprite tiles generated with Photoshop. Software used to create art elements in the game included Maya, 3D Studio Max, Bryce, Daz Studio, Photoshop, Adobe Premier and Soundbooth. In each case, test content was integrated into the implementation iteratively, to assure conformance and optimize results.

When the complete implementation details were established for both content and technical implementation, level design and implementation commenced. The entire process from concept selection to final implementation lasted between a minimum of 8 working hours and as long as 45 working hours. This meant that games were created in a single intense day or over a maximum of 10 days.

Each game employed a burst cycle, similar to industry crunch times. A reasonable, but short time limit was set for each of the four phases of the model. Each of these limits were treated as final deadlines which created a miniature version of crunch time for each of the phases. Implementing the verb, bullet extraction in Healer, for example, was set at four hours.

Artificially limiting the development and design time protected the projects from a few common problems in small, independent game design. The first benefit is that it prevented creative drift from watering down or otherwise diminishing the game's concept.

It also encouraged efficiency in implementation necessitated by short development cycles. Such benefits are common to rapid application development, but as part of this process they had very strong effects on the creative process. Without the standard creative critique cycle, the games remained true to their original concept in way that rarely occurs in larger projects. Inefficiencies inherent in communication ideas and formalizing paperwork were also avoided, simply because there was only one person working on the game over a very short period of time.

5. SCALE

The scale of the Critical Gameplay games reflects a combination of philosophy and process. Philosophically the scale incorporates elements of the Micromentalist movement, a Chicago, USA based artist group that champions the notion that small art is as relevant as dominant big art. The Micromentalist manifesto champions art that is small in scale and big in aspiration, publicly displayed, independent of economic hurdles, and freely distributed.

It was also important to view each game as a kind of alternative lesson. If existing gameplay mechanics teach one view, it was important to emphatically illustrate another. For that reason, the games are relatively small. The design principle is that small, simple, pointed and specific critique is easier to understand than large, complicated critique.

Although not all gameplay in the project is limited by time, the average Critical Gameplay game takes about 20 minutes to complete. Since these are demonstrative experiments in other ways to play, this is an appropriate length of play. This shortened length of play also forces the design to deliver its critique quickly and efficiently.

Most of the games can be extended, but given the nature of the venues (academic conference and art galleries), few visitors have finished any of the games. Instead, visitors elect to reflect on the games, discuss other potentials in their design and play more critical gameplay games. This response is the desired response, providing the player with the project's mantra- games for intellectual profit.

6. CONCLUSION

The majority of video games designed and released to the public are commercially oriented. They concern themselves with target audiences, competitive markets and release dates. As such the content, scale and process of these games is very much driven by market forces. This is true even of the independent game development community, which is often funded or rewarded by commercial game publishers and contest prizes.

This tendency toward a market driven model for the design and development of games has lead the practice of game design into a fairly limited model of production. The process outlined in this research is not wildly divergent from that standard, but it offers a few subtle nuances that have resulted in original, atypical games. In particular, the four phase model for a single developer designer and understanding a game as the intersection of content, process and scale should be useful to makers of games with critique, polemic or persuasion.

It is the author's hope that this research will inspire other game-makers to take the opportunity to create using a single-author model as described. This model seems particularly useful in

situations of argument and critique in game design, where the objectives are more akin to creative writing than profit building.

The Critical Gameplay project will continue, as the potential for such games seems to keep growing. As a concept predicated on intellectual profit it has a sustainable and sometimes insatiable tendency to promulgate.

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