



# Fragile Equilibrium: An Action Game of Melancholic Balance<sup>1</sup>

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## Introduction

*Fragile Equilibrium* is a highly emotive and carefully crafted game that evokes concepts and emotional states such as depression, anxiety, nostalgia, and melancholy entirely without the use of characters, dialogue, or narrative. It uses unique 'shmup'<sup>2</sup> elements in novel ways that are both carefully balanced and that help reinforce a unique metaphor for depression and anxiety. The game serves as a case-study for designed interaction that utilizes *experiential* gameplay—its game mechanics seek to relate emotions, feelings, and perhaps even em-

pathy through played experience. To date, it is one of very few games that engage with mental health through experiential gameplay rather than narrative development and/or the depiction of characters experiencing the symptomatology associated with these conditions.

Instead, the design methodology centered around the concept of experiential, metaphorical games and sought to incorporate nuanced depictions of mental illness and a sense of emotional res-

onance<sup>1</sup> in order to engage the players with the aforementioned topics. It is unique in that it attempts to examine the concepts of depression and anxiety through an experiential lens—players must practice balance between internal repair and external defense in addition to operating within an environment that increasingly becomes more hostile and decayed. From a design perspective, whether or not the player makes the connection between *Fragile Equilibrium* and depression is not as important as the feelings elicited by the game. In this manner, the game gives the player the tools to empathize with depression without explicitly relating the theme to the player, thus allowing them to draw their own conclusions from within their own experiences.

The game was released on Steam, itch.io, and Xbox One in January of 2019 after a development

<sup>1</sup> Portions of this discussion and manuscript are based on a larger, more expansive discussion of these themes presented in "Experiential Depression and Anxiety Through Proceduralized Play: A Case Study of *Fragile Equilibrium*" by A. Phelps, J. Wagner and A. Moger in the *Journal of Games, Self, and Society*, Volume 2, Issue 1, 2020.

<sup>2</sup> 'Shmup' is a slang term that is a contracted form of 'shoot-em-up,' and commonly refers to a particular kind of game in the arcade and early console era in which the player controls a ship or vehicle and faces waves of enemies and bullets in a game world that scrolls across the screen.

period of nearly two years, and was shown at Miami@Play (Filingate Miami, 2018) the ICA Games Studies Division "Ante-Conference" (International Communication Association, 2019), Adobe MAX (Adobe, 2018) in regards to its inventive use of Adobe XD during the design process, and at the Open World Arcade as a part of the Open Worlds:



Figure 1. *Fragile Equilibrium* in both 'repair mode' (above) and Figure 2. 'shmup facing mode' (pages 31-32)



Video Games and Contemporary Art exhibit at the Akron Art Museum. It was the winner of the Award for Visual Excellence at the art showcase at the 2019 International Conference on Interactive Digital Storytelling (ICIDS).

The game is rated 'E for Everyone' by the Entertainment Software Ratings Board (ESRB) and is free to play on every platform for which it is available.

More information on the game and its development is available at [www.fragileequilibrium.net](http://www.fragileequilibrium.net).

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## **A Metaphor of Balance And Self Awareness**

Fragile Equilibrium is meant to portray a constant balancing act between self-reflection (through the mind mechanic) and active engagement with the present through traditional shmup elements as described below. Through this, the game provides a sense of power, agency, and control, and seeks to address depression via these mechanics and themes. Depression is often characterized as solely a negative experience, but some artists, musicians, and philosophers claim that their depression

has informed their creativity and empathy. It is this sentiment of self-reflection as a tool for growth and healing that is pivotal not only to those with depression, but anyone who engages with the nuances and tribulations of life (Pneips, 2018b). It is through experiential metaphor that Fragile Equilibrium strives to tell its story: while the in-game mechanics serve to provide balance and challenge, it was important to the designers that they also served as a metaphor for depression. Andrew Pneips, designer of Fragile Equilibrium, notes in his (2018b) artist's statement that "[Fragile Equilibrium] is not a game that teaches someone about depression, it is not a game that aspires to educate someone

or empower someone or God-fordid claim to cure someone...it intends instead to evoke a feeling, a nostalgia, a sense of something..." (Pneips, 2018b). It is through the use of mechanics within Fragile Equilibrium that the player participates actively in the metaphor and creates connections to their own lived experience.

These concepts are reinforced through the gameplay of Fragile Equilibrium, which is styled like a traditional shmup—the player controls a ship which makes its way from left to right through a scrolling world and faces an ever-increasing onslaught of enemies that fly at the player from the

right. Survival depends on the ability of the player to dodge, weave, and return fire with a variety of weapons that accent their ship. If a player's ship is hit, the player loses health. Additionally, Fragile Equilibrium has an uncommon mechanic: enemies that get past the player crash into the left side of the screen, first shattering and then breaking off portions of the playable area. In a game that calls for constant movement, the detriment to the playable area greatly impacts play and the odds of a player's survival. To this end, Fragile Equilibrium has a "mend" mechanic, in which players can face backwards and repair their world, slowly restoring the playable area and giving themselves room to maneuver again. Additionally, repairing the screen recharges the player's weapons, which then creates a strategic dilemma: players that have taken little damage to their screen must allow for some damage so that they can refresh their power levels. The balance to this mechanic is that players cannot mend the screen and continue to fire at enemies concurrently—they must focus their efforts on what is most pressing at the time and continually make judgment calls regarding the best tactic at any given point in the game.

## **An Experiential Form Of Digital Storytelling**

The experiential gameplay model utilized by *Fragile Equilibrium* stems from a concept of experiential learning, which has been used as an effective teaching tool in education (Killi, 2005). Traditionally, experiential learning models utilize four steps which help to cement concepts: concrete experience, reflective observation, abstract conceptualization, and active experimentation (Kolb, Boyatzis, & Mainemelis, 2001). This style of game-

play allows the learner to discover concepts on their own terms, rather than focusing on rote memorization or regurgitated theories. Additionally, the game seeks to utilize Cziksenthaly's concept of flow or *optimal experience*, such that one becomes singularly focused on a goal and the exhilaration which accompanies the pursuit of that goal (Killi et al., 2012; Cziksenthaly, 1990). Flow is said to compound experiential learning exponentially in that it drives the learner to continually cycle through the four steps outlined above in order to reach their goal—it ensures that things do not become boring or too repetitive. Thus, *Fragile Equilibrium* introduces the mechanic of the broken screen to its traditional shmup roots in order to challenge players and their preconceived notions of shmups.

These four stages of experiential learning and game design were actively pursued and purposefully implemented during the development of *Fragile Equilibrium* in order to foster problem solving and "discovery learning" (Killi, 2005), a concept in which ideas and procedures are uncovered through repeated effort. In order to fully engage the player and reinforce concepts within the game, games must directly provide clear feedback, well-defined goals, and challenges that are on par with a player's skill level at any given point (Killi, 2005; Cziksenthaly, 1990). As experiential gameplay seeks to conjoin gameplay and experiential learning to foster flow, they must also seek to acknowledge both cognitive and behavioral exercises as they are applied to learning, a notion which acknowledges constructivist (Phillips, 1995) and pragmatist (Kvinnen & Ristela, 2003) theories (Killi, 2005).

The more a player can become engaged with the game, from mechanical representation to the connection they have to the themes, the more meaning can be derived from the game itself. Games must intentionally establish what experience they wish to convey from the outset to create a point of reference which informs all else from the beginning (Rusch, 2017). It is from this point of reference that meaning originates, and trickles down through the game, from code to mechanics, from art to worldbuilding, from individual elements to cohesive design. Games that are considered to be 'deep' rely on themes to create a resonance with the player, drawing on their experiences with culture, past experience, shared mythology, purpose, and humanism to create a context from which to experience the game world. The use of metaphor in gaming lends itself to the framework of experiential gameplay since it is meant to stimulate reflective observation and active conceptualization. Rusch directly cites mechanics as a vehicle for metaphor in games (2017, Chapter 4). The balance between external defense and internal focus and repair in *Fragile Equilibrium* is meant to challenge the player's expectations of constantly fighting incoming projectiles. It pointedly differs from the normal shmup practice of having enemies arrive from a single direction, and it provides a secondary survival mechanic that is ever-present and needs constant monitoring and attention. This mechanic, along with other elements of the game, is meant as an experiential metaphor for depression, mental health, and self-care. The player must at once both 'deal with' the normal 'shmup world'—i.e. the external enemies and projectiles that come at them wave by wave, but also with the need to (literally) turn around and focus on their own decaying view of the game world. In this sense the game invites

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players to reflect on external and internal conceptualizations of the world.

This 'balancing' mechanic, which is heavily repeated throughout the game, exemplifies the amplification of metaphor through repetition (Bogost, 2007). The game's shmup mechanics are contrasted by the calming color palette and serene (although still energetic) music. As the screen breaks away, the game effectively uses the navigation (and compression) of the environment to stage a dramatic, and repeatable, story, which has similarities to the way that space is often used in conjunction with more traditional game narratives (Fernández-Vara, 2011). The elements of the game work in concert to reinforce the parallel with depression and anxiety: the feeling of anxiety is heightened as, inevitably, more of the screen is eaten away and the player's movements are restricted over time. This metaphor and quest for balance are then repeated throughout the additional mechanics of each level of the game:



## Visual Aesthetics And Nostalgia

The inspiration for the serene visual aesthetics of *Fragile Equilibrium* came from a number of seemingly disparate sources, and through these design elements attempt to create a post-apocalyptic nostalgia (Fuchs, 2016) for the time where shmups peaked in popularity. Artistically, the game draws heavily from 1980s fantasy art and music, shmups such as Treasure's *Ikaruga*, Kahatsus's *Rai Den*, and Irem's *R-Type*, as well as the artistic style of Roger Dean album covers (Dean, 2008; Dean, 2009). Additionally, the game features a nod to the

Wabi Sabi aesthetic (Koren, 2008), which is "loosely translated as 'the recognition of the beauty of the imperfect'" (Phelps, 2018b). The enemies and levels of the game itself become imperfect over time, in addition to the more literal decay of the screen itself. It is this passive sense of serenity, beauty, and nostalgia that positions *Fragile Equilibrium* as a vehicle for melancholic reflection: it is meant to evoke emotion and contemplation through every aspect of the world.

Nostalgia is a key component to *Fragile Equilibrium*'s art and design. The game is intended to be reflective of the 1980s and "aspires to encompass

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a nostalgia for that entire era" (Pheps, 2018b). Engagement with this yearning for past feelings and cultures is rather prevalent within game production. Marta Garda (2014), using terminology from Boym (2001), distinguishes between two forms of nostalgia: restorative, or that which involves practices that keep "the retro titles alive in the collective memory", and reflective (Garda, 2014, p. 3). *Fragile Equilibrium* takes a reflective approach to nostalgia, which "refers to an individual experience, [and] is linked to the process of cultural remembrance" (Garda, 2014, p. 4), and attempts to evoke collective feelings of a bygone era of gaming. This is exemplified throughout *Fragile Equilibrium* in its retro aesthetics and gameplay style, and through its incorporation of traditional mechanics such as enemy waves, power-ups, shields, etc.

Another aspect of *Fragile Equilibrium* that is significant are the ruins that permeate its game world. Ruins are always referential: they refer to a building, a time, a culture, and thoughts that have passed. They naturally tell stories of life and glory as well as of death and destruction (Fuchs, 2016, p. 8). Because of this, ruins are very much narrative elements. The game's engagement with them is nostalgic (Fuchs, 2016, p. 3), and also makes a designed play on agency with regard to ruin, seeking to specifically extend a form of "deconstruction mode" in which buildings or objects are turned into ruins "on demand", so to speak, within the context of a game" (Lowe, 2012, p. 67). This form of "active ruination" the player observes and is involved in causes them to bear witness to the creation of nostalgia. *Fragile Equilibrium* focuses on the long-ing aspect of nostalgia and its ties with depression, which can sometimes bring about feelings similar to the ache one feels with nostalgia. Through utilizing nostalgia, the designers have created the

possibility of connecting players with this feeling of longing and created the possibility of cultivating empathy, as nostalgia in the game world evokes thoughts of nostalgia for the player's past life experiences and/or world view.

## Conclusion

Ultimately, *Fragile Equilibrium* wonders as to whether more "traditional" game genres, tropes and mechanics could facilitate the expression of deep, meaningful experiences and potentially reach a wider audience. By building upon the forms and mechanics of a traditional genre, *Fragile Equilibrium* challenges the design space of what such games are capable of, and their extended, or existential, purpose. Additionally, the game attempts to showcase non-traditional ways to engage with and depict anxiety and depression. This is done without the use of characters or narratives and through experiential gameplay and metaphor—by using mechanics, replication, and a careful attention to aesthetic conditions. *Fragile Equilibrium* constructs a metaphor for depression and anxiety without ever naming them outright. The nostalgia of the 1980s and the decaying ruins in the game work to further impress these feelings onto the player. These conditions work to create an element of melancholic reflection, which serves to foster eudaimonic gratification within the player, prompting them to turn inwards and evaluate the core philosophical tenets of the game. Through this artistic representation of these themes, the game seeks to challenge our notions of existing design, and explore instead encoding meaning and message through experiential, metaphorical means.

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