

"Zombie Yoga" – Subjective Game Design

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Abstract

This paper discusses the design process of "Zombie Yoga", a metaphorical, third-person, single-player Kinect game in which the player does Yoga poses to overcome emotional issues. The focus lies on the two main iterations the game underwent from its conception and initial design in the winter of 2010 to its completion in the summer of 2012. These iterations reflect a shift from a more objective, outward oriented approach to a subjective design approach that draws on personal life experiences and is informed by my own meaningful play with the game's main themes: loss, individuation and recovering playfulness. It explores how embracing subjectivity was the key to opening up the game's emotional range, increasing gameplay opportunities and facilitated the development of an uncompromisingly authentic and metaphorically rich experience that intends to provide meaningful play and emotional empowerment for players.

Keywords: subjective game design, metaphors, Kinect, physical input, emotion.

Introduction

The idea for "Zombie Yoga" emerged during my first Tai Chi class. We were asked to do a partner exercise called "push hands", in which the goal is to guard one's physical space by gently but firmly pushing away the hands of the person invading that space. I was paired with a 60ish, small lady, who barged into my space like there was no tomorrow. My helplessness in regard to her resolute conquest made me realize how much I have felt under siege in my private life at that time. The invasion of my physical space in the Tai Chi class was a metaphor for the emotional invasion I had been experiencing. I started to push back and felt great triumph when I regained my territory. With this experience, the idea for "Zombie Yoga" was born. Having a history in designing emotional health games ("Akrasia", "Elude"), I wanted to make a game that engaged and empowered players *emotionally* by leveraging the body to positively stimulate mind and soul. It should be a single-player Kinect

game in which the player did Yoga poses to overcome inner fears and other emotional hurdles.

What could a game bring to the table that a Yoga or Tai Chi class could not? In a game, the physical activities can be embedded into a fictional context that reinforces their intended inner effects. E.g. Yoga poses are known for their potential to foster healing, strength and (inner) balance. However, these effects might sometimes be elusive. When you do the pose without commitment and focus, its potential benefits are reduced. Embedding the pose into a fictional context where it serves a concrete gameplay function (e.g. to heal, guard, balance) fosters performance with intent. In the game context, the poses' effects on the gameworld become visible, accessible and experientially tangible.

It has to be noted, though, that "Zombie Yoga", despite its intention to empower players emotionally, has not been designed to produce a measurable increase in psychological well-being (even though it may occur). "Zombie Yoga" is an example of "subjective game design" and this paper describes the process of acknowledging this over the course of its 18 months of development. It discusses the game's two, major design iterations after its initial design, and how each one presented a more radical step towards the game I really wanted to make. It is an account of building up the courage to inform design decisions by my own "meaningful play" with personal themes and concepts. Inspired by Jung and Winnicott, I define "meaningful play" as a creative and transformative exploration of personal and emotionally resonating ideas (see Chodorov 1997; Winnicott 1982). I believe that "[w]hen you make a thing personal, it somehow speaks to people and the truth of it is felt." (Andresen & Burstein 2011). I hope that this paper encourages fellow designers to embrace a subjective approach that spurs deeply meaningful and personal gameplay experiences.

1. The Seven Corner Stones Of Design

Before it makes sense to go through the major iterations of “Zombie Yoga’s” design process, I would like to sketch out the seven design corner stones that remained intact from start to finish. They were derived from my transformative Tai Chi experience described above and gave the project the inner stability needed to see it safely through the many changes of direction.

1. The game’s core concept is not a physical, but an emotional, inner conflict.
2. The goal of the gameplay experience is to foster a sense of mastery over this emotional conflict within the context of the game, but also beyond, extending to real life.
3. The means to achieve an experience of mastery is physical action in the form of Yoga poses.
4. The emphasis is on the mental and emotional aspects of yoga poses. The poses' effects in the gameworld are manifestations of the poses' inner effect. The focus is thus on the poses' symbolical nature, rather than the physical workout. This is not an exercise game.
5. “Zombie Yoga” should be accessible to a wide audience and appeal to players who are open to try new things, not just hardcore gamers, Zombie lovers or Yoga aficionados. Thus, the Zombie / horror survival aesthetic has to be toned down and the Yoga aspect takes the form of symbolical actions rather than an intense work-out.
6. The fictional aspect of the game (i.e. gameworld and narrative) is important as it provides the added value to simply doing Yoga. The fiction needs to be suitable to support and reinforce the emotional and mental potential and intended inner effects of Yoga poses.
7. The metaphorical nature of the game is key, particularly in regard to representing its abstract (emotional) concepts. E.g. inner fears are represented by Zombies.

Following Johnson and Lakoff (1980), “The essence of metaphor is understanding and experiencing one kind of thing in terms of another.” It is thus of utmost importance that every metaphor in the game is coherent with the concept it represents. The behavior of metaphorical elements needs to share salient characteristics with their source and not have any elements that are inconsistent with the source. That means Zombie behavior must not be simply derived from an established Zombie topos, but has to be filtered through the lens of metaphorical coherence. The relentlessness of Zombies, their clawing, greedy behavior and their ability to infect us with a deadly virus correspond well with the experience of fear. We can feel fear sneaking up on us or suddenly assaulting us. They are hard to shake and can spread within us like a disease until we are unable to move or breathe.

The following will discuss how these corner stones carried the various designs for “Zombie Yoga”, and helped ensure we did not stray too far from the original intent for the game. I will also describe the changes and shifts in emphasis that occurred within this framework and, particularly in regard to mechanics, themes, narrative and metaphors, as these are the areas within which the relevant iterations can be located.

2. The Original Pitch: “Zombie Yoga’s” Initial Design

When the idea for “Zombie Yoga” was born, I had just returned to Austria after three years as a post-doctoral research at MIT, and I wanted to keep making experimental and meaningful games. However, I was faced with a new situation of no funds and no infrastructure. As “Zombie Yoga” was meant for the Kinect, the thought occurred to pitch the idea to Microsoft. Hence, two colleagues of mine, whom I had successfully infected with the “Zombie Yoga” virus, and I, prepared a pitch to be presented to Microsoft Game Studios at Game Connection San Francisco in February 2011. To lend the project credibility, we partnered up with Sproing, an experienced Austrian game studio. Sproing agreed to

implement the game should we get funding from Microsoft. Now our job was to sell the idea, which had just seen the light of day. The only things I was (relatively) clear about were the corner stones sketched out above, but I did not have a concrete design yet. I did not even know, exactly, how Yoga should be used as a core mechanic! I only knew that developing the narrative and deciding on the poses had to go hand in hand, if there was to be a meaningful and mutually reinforcing correlation between the two.

2.2. Theme, Narrative and Core Metaphor

Initially, the central theme of "Zombie Yoga" was "Anxiety", defined here as an apprehended threat without real evidence. The particular form of anxiety the game focused on related to self-doubt and performance anxiety. This fear manifested itself metaphorically in a Zombie outbreak, with the Zombies themselves being the individual representations of fear of failure. The story should start with a cut scene that showed you, a twenty-something intern sitting miserably in her office cubicle, desk cluttered with unread files and dirty mugs, filled with the remains of last week's coffee. The surrounding cubicles are beacons of productivity and efficiency, "employée of the month" pictures proudly hanging from the walls, mocking your very existence. Your boss pays you a visit in your private hell of self-doubt and chaos and overwhelmed by fear of what he is going to say, you black out. Upon waking, gameplay starts. You find yourself in the middle of a Zombie outbreak. Your inner fears have become so strong that manifested outside of yourself as Zombies that now fill the world. Your goal is to flee the office building and get home to your folks who live in the country on a farm. There, mom will cook dinner, the dog will lick your face and everything will be all right, for sure. But the Undead roam the streets in hordes. Panicked, you flee into an abandoned warehouse, where you encounter the Street Yoga Gang. This is a group of people who use the warehouse space to engage in an ancient practice to empower body and mind. They seem strangely unaffected by the Zombie outbreak outside. The Street Yogis recognize the state

you are in, speak about the importance of finding inner peace and unleashing your "Inner Warrior". They also teach you the moves you need to survive the (what you refer to as the) Zombie apocalypse, but which they recognize as a metaphorical projection, not a real event. Then they send you on your way. You eventually make it to your parent's farm, but it does not bring the relief you had hoped for. The Zombies are still out to get you. You cannot run from them. Your only choice is to confront them. You go back to the city and re-enter the office building, which is now a Kafka-esque space with huge, imposing doors and a generally threatening architecture. In its corridors and offices, you encounter your worst nightmares, the sources of your insecurities and performance anxieties. E.g. in the copy chamber waits your zombified primary school teacher, printing out sheet after sheet of "abc"s and berating you that you will never amount to anything if you cannot even spell properly! Win and end the game by overcoming and relinquishing every, single fear by doing the appropriate pose or sequence of poses until your Inner Warrior is strong, and the few Zombies that are left are easy to control and do not pose a threat anymore. So far the story. How should the Yoga aspect be integrated into it?

2.3. Identifying Yoga Poses as Core Mechanics

Yoga comes in many different styles such Ashtanga, Iyengar, Hatha, Vinyasa. They all have different emphases on poses (=asanas) and sequences, and the inventory of poses is huge. Researching the question on how to approach the Yoga part of the game was the perfect excuse to take lots of different Yoga classes in various styles. I did not just want to make a gimmicky game that leveraged the appeal of Yoga to draw players. I really wanted to do Yoga justice and to find a way of using poses as core mechanics that was consistent with this ancient practice. Hence, I was focused on Yoga's physical aspects first, despite wanting to tap its mental and emotional benefits. To start with the obvious, tangible and easily accessible is a logical first step. When dealing with abstract concepts such as emotions,

however, it is also a step one needs to get out of the way before one can focus on what really matters: the underlying experience. In this case, the way to get to the underlying experience was through the physical part of the poses, which complicated things. However, it became clear early on that whatever I did, "Zombie Yoga" would never be able to compete with a real Yoga class in terms of the exercise aspect. For the poses to function as core mechanics, they needed to be translated into individual gameplay verbs. In a Yoga class, you usually encounter 20 or more different poses (e.g. Bikram Yoga is a sequence of 26 poses). Having 20 verbs / core mechanics in a game would not make much sense. Particularly for novices of Yoga, the game would have a steep learning curve, indeed. Hence I tried to narrow it down by identifying a limited number of verbs first, and then finding poses to fit them. The main consideration in this process was which verbs had the most empowering potential?

Of course, this could not be decided in a conceptual vacuum. The original theme of the game – "Anxiety" – the metaphor of the Zombies as representations of inner fears and the concretization of the theme and its core metaphor into the narrative of a Zombie outbreak had to be kept in mind. Which core mechanics would help the player to reach the game's goal: to build up his / her "Inner Warrior", to become the master of his / her anxieties? Answering this question needs to take Zombie characteristics and behavior into account: Zombies (as anxieties) will always be drawn towards you and know where to find you (when suffering from performance anxiety, the pressure to perform will always be accompanied by fear); they will corner and crowd you, unsettle and unbalance you. They get in your way and hinder your progress to where you need to go (e.g. try boosting your career through speaking up at a meeting when you are afraid you'll make a fool of yourself whenever you open your mouth). Once anxiety catches up with you, it spreads inside you like a disease until it takes over and you are nothing more than its mindless slave (e.g. you lose control in a panic attack, cannot think clearly). Unless, of course, you find ways to fight and deal with your anxieties. The table below relates the conflicts / challenges of the game as derived from its fictional context

(i.e. its theme, narrative and core metaphor of Zombies as anxieties) to the gameplay verbs needed to deal with this conflict and reach the game's goal of mastering one's fears. It further relates the verbs to the concrete poses they were translated into due to a salient, experiential correspondence between verb and pose. Finally, the table contains a row on how the poses were intended to be visually represented on screen to further reinforce their metaphorical meaning.

Zombie characteristics / behavior	Gameplay verb	Yoga pose and inner effect	Representation on screen
They are drawn to you	Hide (from them)	Child's pose: a restorative pose that helps counter stress and calms the brain	Avatar in child's pose, semi transparent on screen
They unbalance / unsettle you	Balance (yourself)	Tree pose: balancing on one leg requires a strong focus on one's center, thus promoting inner balance and peace.	Roots shooting into the earth to signal strong groundedness, glowing inner center
They crowd you	Push back (the horde around you)	Warrior I: strong standing pose; claims space in three directions. Experience of strength, determination and spaciousness, openness.	Protective light bubble enveloping avatar in Warrior I pose; Zombies would be visibly pushed back upon contact with bubble
They block your path	Part (the horde)	Warrior II: strong standing pose. The outstretched arm focuses one's attention forward. Determination to cut create a path through every obstacle in the way (in Yoga lore, the arm signifies the sword that cuts the heads of enemies).	Avatar in Warrior II pose would shoot a sword like object from the outstretched arm. Zombies in one's path would get pushed forcefully to the left and right, creating a safe passage to walk through
They follow you	Walk / run	Mountain pose to walk; chair pose to run	When player is in mountain pose, avatar would be shown walking; to run, player would enter the more taxing chair pose.
They infect you and if unhindered will take over	Heal (reduce inner infection)	Meditation: lotus or half-lotus; cross legged seat	At certain safe spots in the game, the player could enter meditation state. Avatar is shown in mediation pose with golden light filtering through the crown of his / her head, filling the whole body and

			eliminating the spreading blackness of the inner infection.
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2.4. Discussion of the Initial Design

We presented this idea together with a life-action video we made to illustrate gameplay and atmosphere to Microsoft Europe and Microsoft World at Game Connection San Francisco in February 2011. While both Microsoft representatives loved the concept and we were indeed invited to present a more detailed pitch, one of the higher ups was appalled by the design. Being a Yogi himself, he felt offended by our use of Yoga in the game. He noticed correctly that this game would not be able to provide the same experience a Yoga class could. While this was never my intention, I had indeed emphasized the physical aspect of Yoga in the initial design and his misunderstanding was, while unfortunate, very understandable. In the pitch, a leveling-up system was mentioned that allowed you to “upgrade” poses in the different verb categories. E.g. while tree pose was the default pose in the “balancing” category, it could be upgraded to the more difficult eagle pose for stronger in-game effects. I thought this would incentivize people to really practice Yoga and get better at it, or accommodate for different skill levels. The warehouses of the Yoga Street Gang would further be spread all over the game environment and players could seek them out to practice and learn new poses there in peace without having to fear Zombie attacks. With the physical aspect of Yoga being so strongly emphasized, the game’s fictional context, the Zombie apocalypse, felt like a bad joke. For someone who claimed to want to focus on the mental and emotional aspects of Yoga (see corner stone 4 above), I came pretty darn close to making an exercise game. Why? Because, while my focus was on the inner effects of poses, it seemed only logical that the key to these inner effects would still be the poses themselves. I believed that the closer I came to a real Yoga workout in the game, the more I could leverage Yoga’s mental and emotional benefits. This may seem to make perfect sense, but it privileges

the attempt of simply reproducing the real-life experience over its deliberate *design* in the game. It privileges the illusion of an objective approach ("this is how it works; reproducing that will create the original experience") over a subjective approach: "this is what it feels like to *me*. I believe this is a worthwhile experience I want to share with players. To enable this experience, I need to figure out what its most salient elements are and capture and amplify them in the design." The subjective approach requires taking liberties, to stray from the source in order to come closer to an experiential truth. Trying to cram a full Yoga workout into the game would neither do the practice of Yoga justice, nor would it help to convey my point about the emotional / mental potential of this physical activity. I needed to find the core, to focus in on the experience, to trim, cut and prune it like a bonsai in order to create something that provided added value and justified the development of a game that used Yoga poses as means of interaction with the gameworld.

2.5. Reassessment of Core Mechanics – Less is More

When we made the life action gameplay video in lieu of a gameplay prototype for our pitch to Microsoft, I knew we were on the right track. We shot the video in a large, open area with trees and bushes. It was very "Walking Dead" like. I played the main character, who was being attacked by the horde. The Zombie actors, all hooded, face hidden by scarfs and other dark clothing stopped being people, but turned into faceless fiends who shuffled, groaned and shambled relentlessly towards me. When they came close, I entered a Warrior I pose and the mob froze. I then slowly changed from Warrior I into Warrior II and, with the power of the stance alone, parted the still stunned horde to create a safe passage for me. It took a few takes until everyone got everything right. With every take, I felt the power of the experience. I felt hairs in my neck stand on end when the enemy closed in on me. Heart pounding, I let them come close, so close. Very deliberately, I entered the powerful, protective Warrior I pose. I took a stand, symbolically and literally, with legs wide apart and

strong arms stretched upwards, exposed but fearless chest. And they all stopped in their tracks, until I entered the next pose that shoved them aside, as if by magic; my outstretched arm an extension of my inner strength. Yes, this worked. The experience I was going for in this game was definitely there and it could be captured in two poses alone. Consequently, I decided to drastically cut the number of poses in the game and to eliminate all attempts at choreographing sequences of them. Instead, "Zombie Yoga" should focus on a few poses' individual, symbolical potential by embedding them into a meaningful, fictional context. Here are the main design iterations in regard to mechanics that were taken into account for the game prototype I started developing nine months later at DePaul University with a team of students and two recent DePaul graduates:

- The game was put on rails with an auto-move function (one foot forward); no extra pose for running.
- Gameplay verbs were reduced to
 - Guard (Warrior I – protective light bubble)
 - Part (Warrior II – sword shoots out of outstretched arm to part the Horde)
 - Heal (Tree pose – healing in the context of anxiety means finding inner balance; thus healing and balancing were conflated into one. Doing tree pose cleared up the blackness of the inner infection just like meditation pose was intended to do before)
- Poses could not be leveled up; they needed to be powerful but simple and reasonably accessible so a wide player range without previous Yoga experience could do them (see corner stone 5 above).

2.6. Reassessment of Theme and Narrative

A clearer focus in regard to the core mechanics also prompted reflection on the game's main theme and narrative. While the core concept should remain (mastery over) anxiety, I was not happy with how in the initial design the particular form of anxiety – performance anxiety, fear of failure – was integrated into the game's narrative. Only the beginning and ending of it, the office scenes, truly related to the concept of performance anxiety. The rest of the game contained many situations that were unrelated to this idea while still featuring the Zombie apocalypse. It did not make sense. If the Zombies represented fear of failure, why would they be haunting the main character on the subway, or in an apartment building etc.? The fiction that was meant to support and reinforce the emotional and mental impact and inner effects of the poses (see corner stone 6) was arbitrary for large parts of the game. That was unacceptable. Fiction and mechanics had to match in order for meaningful play to happen. Ideally, the game would present the player with a recognizable situation that evoked discomfort and then provided the opportunity to master that situation through Yoga poses, making the effectiveness of the pose experientially tangible within that situation (see corner stone 2). My hope was for "Zombie Yoga" to evoke what James Gee referred to as "Alternate Reality" in his keynote at the 2012 Games for Change festival in New York. Gee defined "alternate reality" as overlaying real life experiences with gameplay experiences. E.g. if you just played several hours of Grand Theft Auto and then went outside, you would see life differently: street lights became obstacles to run over, bridges were perceived as ramps etc.

The wish to establish a strong connection between in-game action and real life kept my ideas for a suitable fiction at first anchored in a physical, immediately observable reality. While the game's core concept (fear) was intangible and had to be expressed via metaphors, I thought it was important to set the game in real environments for the empowering gameplay experience to more easily extend into real life. Thus, for the tech demo / proof of concept

prototype, I decided to focus on the subway scene from the original design. The idea was to scratch the original narrative completely and to focus on making a series of small vignettes that all centered around a different main character with a different fear that would be dealt with in the environment where it arose.

3. Developing the Tech Demo: "Zombie Yoga's" First Iteration

Development of "Zombie Yoga" started late in the Fall of 2011 at DePaul University with a team of students and recent DePaul graduates. The tech demo / proof of concept prototype was set in a moving subway train. The player took the role of socio-phobic Rik, who decided to face his fears and go on a subway ride. The goal was to walk from one end of the train to the other without being overwhelmed by anxiety (Zombies) until the train reached its destination. The avatar moved automatically along a fixed path through the subway when the player put one foot forward to indicate "walking". Gameplay consisted in keeping Zombies at bay with the help of three poses:

- Warrior I create a protective light bubble around oneself that stunned the Zombies and pushed them back;
- Warrior II shot out a sword from the outstretched arm and pushed enemies in one's path to the sides, creating a safe passage to walk through;
- Tree pose could be performed at an Om sign, spray painted on the inside of a train wall. The Om sign signified a safe point which, when activated through tree pose, saved the game and healed one's inner infection that went up continuously from the start of the game and spread faster when the avatar was attacked by Zombies.

Zombies did not bite but "hugged" the avatar and spewed black particles on him, representing the idea of "overwhelming" and "instilling" fear.

We made the game in Unity Pro and used a new tool called the Gadget Accelerator Kit (GAK), which helped with Kinect integration. The GAK has been developed by

Microsoft and was at the time in a closed beta test, which we were graciously invited to take part in. The technical implementation of the design, particularly the challenges to work with the Kinect, played a crucial role in further specifying the game's vision. Ironically, working with the Kinect finally pushed me to fully embrace and commit to the inward oriented, emotional, mental, metaphorical nature of the game's core themes. The problems we faced with pose detection, which were comprised of the Kinect's issues with depth perception as well as players' difficulties to do the poses "right", made me come full circle conceptually. The idea for "Zombie Yoga" started with the realization of the invisible, intangible, inner effects of physical gestures. Exploring the use of Yoga poses as core mechanics had shifted my focus to their visible, tangible and physical aspects, over-emphasizing the exercise component. Now I came back to realize that the intent with which a pose was done was much more important than its execution. I was further encouraged in this approach by the works of Mosche Feldenkrais, who states that movement should not be about effort (Feldenkrais 1990) and that it does not matter so much how well one performs an action physically, as long as it is performed with awareness and intent. We thus made the Kinect pose detection as lenient as possible without going so far that it would not be able to distinguish between poses anymore. This also made the game more accessible to players with limited Yoga experience (see corner stone 5). Of course, players could also take advantage of this leniency. One of my programmers once told me when I playtested the game: "You don't really have to go so low in this pose. It's enough when you just kinda do this," and he simply held up his arms to indicate Warrior I. So, yes, it is possible to do a very half-hearted job when doing the Yoga poses. As a result the gameplay experience will probably not be as meaningful or effective. Obviously, the more you invest, in terms of intent, awareness, dedication, the more you will get out of it. While I have limited control over players' intrinsic motivation, it is my ambition to provide a framework for them that promotes doing Yoga with intent and awareness. This particularly regards the game's fiction (see corner stone 6).

The newfound commitment to the inner effects of Yoga initiated a bigger shift from outward to inward orientation that affected all levels of the game: mechanics, themes, narrative and metaphors. The game's fiction should no longer be anchored in visible, tangible real-life but set within a metaphorical mental and emotional space. While we were still finishing up the tech demo, I was already prototyping what was not just the final iteration, but a reinvention of "Zombie Yoga": the game that became "Zombie Yoga – Recovering The Inner Child".

4. Second Iteration: "Zombie Yoga – Recovering The Inner Child"

The first thing that needed to be iterated on were the mechanics. After the tech demo, it was clear that they were too limiting to sustain a whole game. There is only so much you can do with protective light bubbles and the creation of safe passages. From the start, the idea of an "inner light" had been an important part of the game's conceptual vocabulary. This idea was derived from my work with Dr. Dorothea Zillich, whose therapy group I had visited for one year in Vienna, Austria. Dr. Zillich's approach included methods from integrative gestalt therapy, Jungian Psychodrama, energy work and healing rituals, which often took the form of light meditations. Imagining an inner light as our divine essence or true self, which protected the body and mind from darkness, be it physical (illness) or psychological (fears, worries, depressive thoughts), strongly appealed to me. I found myself contemplating this inner light, trying to make it grow until my whole being was filled with it. Its emotional and mental healing power translated easily into "Zombie Yoga's" healing mechanic.

In reconsidering the game's core mechanics I thought about the challenges they were supposed to overcome and it became apparent that the game's main conflict was one's inner darkness. The problem was that my initial interpretation of darkness as fear (represented as Zombies) had been too narrow. To expand gameplay, I had to explore other instantiations of darkness such as anger or sadness. The antidote to these ailments was the light.

Consequently, light had to be more pervasively integrated into all poses. This changed the core mechanics as follows:

4.1. Mechanics: to integrate the "inner light" into the core mechanics, I introduced a lightball (an external projection of the inner light) that hovers in front of the avatar and which can be directed with Yoga poses to interact with the gameworld:

- Warrior I sends it up,
- Warrior II sends it forward,
- a variation of Goddess pose in which the arm is stretched out either to the left or the right side sends the ball to the left or to the right, and
- Tree pose calls it back to the avatar.

4.2. Embracing Subjectivity and Personal Themes

An explanation of the lightball's function in the gameworld is best described alongside a description of the iteration in the game's fiction. The new aspects of darkness I decided to integrate into the game alongside the concept of fear, were derived from the personal themes I had been working on in the context of Dr. Zillich's therapy group: loss, individuation and recovery of playfulness. I translated these themes into obstacles on a journey, whose goal was the liberation of the inner child. The inner child can be understood as the source of aliveness, feeling and creativity (Cappacchione 1991). The obstacles on the path of recovering the inner child were represented by emotionally loaded scenes from the main character's past that had led to a disconnection from her playful, feeling self. "Fixing" these scenes reconnected the character with her inner child and overcame the darkness.

Concretely this translated into the story of burnt-out ballerina Aya, who has lost her joy in life and dancing. Everything seems dull and grey, a pointless routine. In a non-interactive intro sequence, Aya seeks the help of a wise man who promises to guide her on a journey that combines meditation and movement and whose goal is the reconnection with her

true self. Aya's mind then becomes the setting for the game. The journey starts on a theatre stage, which serves as the game's tutorial. There the player is taught the poses she needs to interact with the gameworld. Gameplay continues backstage, through a red theatre curtain, and onto a downward leading spiral path that represents Aya's travel through time from the present to her childhood. At the bottom of the spiral the inner child is trapped in a bone cage that slowly expands as the player heals the emotional wounds in Aya's life. The game is won when Aya has reached the bottom and releases her inner child from her cage.

The format of the spiral journey was inspired by inner child meditations led by Dr. Zillich. Their structure was simple, starting in the present, but then moving back to various times in one's life where one might have sustained emotional wounds. The wounds were healed by sending light to them until one reached one's toddler self. Embracing the inner child ended the journey. In his accounts on "active imagination", C.G. Jung also describes methods of journeying downwards into the subconscious to reconnect with lost aspects of the self (see Chodorov 1997). Similar ideas can be found in the shamanic practice of journeying and retrieving lost pieces of the soul from the Lowerworld (see Harner 1990, Ingerman 1991)).

Theme 1: loss: The spiral path is structured in hallways that introduce a theme and lead to a scene that needs to be "fixed". The first hallway that follows the tutorial theatre stage deals with Aya's memories of her grandfather dying in the hospital. This hallway is filled with grief and fear (Zombies). It is dark and the only noises are hospital sounds, the beeping of a heart-rate monitor that flatlines in the end. Sending the lightball up with Warrior I illuminates the hospital lights that float overhead. It brightens up the hallway so that one's fears become more visible and are easier to fight. Shooting Zombies with the lightball diffuses them to black smoke. Getting overwhelmed by Zombies means "game over" and one has to start again at the beginning of the hallway. The path leads to the grandfather's living

room, which one enters through another red curtain. The core metaphor in the center of the room is a broken grandfather clock in a block of ice. The frozen clock represents the inability to let go, the refusal to accept change. It is the only object visible upon entering the scene. Before the problem can be "fixed", it needs to be acknowledged by sending light to it. Hitting the clock with the lightball makes three objects appear that are associated with the grandfather and experiences of comfort: a leather armchair, a gramophone and a fireplace. This scene is purely about contemplation, about creating an atmosphere of nostalgia and longing. The challenge is solely emotional, one cannot lose the game here. Players should be free to focus on their personal feelings. Hitting each object with the lightball triggers Aya's voice over, connecting the objects to the fond memories they evoke. Each recovered memory fixes a part of the grandfather clock until it is fully functional and the only thing that keeps it from working properly is the block of ice – the metaphorical representation of rejecting change. Hitting the clock with the lightball melts the ice, meaning time is again allowed to pass. Without embracing the passing of time, the change it brings, even death, there can be no life.

I am not suggesting that playing this scene will inadvertently foster an acceptance of change or transformation within the player. However, I believe it offers a perspective on loss that is an alternative to clinging to pain, and idea for the player to explore, play with. Also, emotional wounds are so hard to address. It seems like one can DO nothing about them but wait until they are healed by time. This is why I believe that their metaphorical representation in the context of a game, where they are made tangible and can be acted upon fosters a sense of agency. This idea is supported by a strategy from psychotherapy called "symbolic modeling" in which patients create a metaphorical representation of their inner landscape, which is then modified with the help of the therapist to enable personal development. (Lawley & Thompkins 2000).

At the end of the grandfather scene (and every other scene that follows), the camera will swoop down to center of the spiral and show how the bone cage expands a bit.

Theme 2: individuation: The next segment of the journey deals with the theme of individuation. It addresses the problem of being too strongly identified with someone so that their opinion about oneself, determines one's own sense of self-worth. The goal is to establish a sense of self-worth that is more internally oriented and independent of the other person's judgment. Individuation is "the transformation process that loosens the attachment to the unconscious." (Chodorov, 1997 p.100).

Using an easily understood cliché, this issue is translated into Aya's relationship with her overbearing, critical mother. Leaving the grandfather scene leads to another hallway that represents intense, emotional struggle. It is very dark and filled with stage spotlights that, when illuminated with the lightball, only remain turned on for a limited period of time. They flicker, providing unreliable, ephemeral light. The spotlights represent the other person's praise that makes you feel great when you get it, but you cannot depend on it. It is not constant, never lasts – just like the applause after a performance. The hallway is further filled with hordes of Zombies, representing all the self-doubt, the hunger for lasting love. The entrance to the mother scene is blocked by a picture of a huge, entangled marionette. Players also see that picture when they get the "game over" screen. It is the opposite of a liberated self: it represents Aya being controlled by her unconscious. Shatter the marionette picture with the lightball to enter the mother scene. At its center, there is an enormous dressmaker's dummy with perfect hair and painted lips, representing the stiff, emotionally distant, overbearing mother figure. Using space metaphorically to show that everything revolves around the mother, the scene features the following pictures in a circular path around the dummy:

- Picture 1: potted plants, bound up, growing on a trellis: represents living according to someone else's ideas.
- Picture 2: a spotlessly clean stove that is clearly never used: represents the lack of warmth and emotional nourishment.
- Picture 3: a ballet bar: represents dance lessons.

The pictures are connected to the mother figure with umbilical chord like tendrils. The tendrils further reinforce the idea of the mother physically being tied to all these aspects of Aya's (internal) life. Since the pictures are placed on a circular path around the mother the tendrils connecting them to the mother also hinder progress. To advance on the journey to one's true self, one has to cut all tendrils, reclaim control over one's life, and dis-identify with the mother. This goal is not so easy to reach. Gameplay in this scene models the struggle of keeping one's focus on oneself instead of the other person. To cut the tendrils, the lightball needs to hit the pictures. Hitting the pictures transforms them to indicate an inner change:

- Picture 1: plants on trellises now grow freely: represents living life according to one's own desires.
- Picture 2: a happy bubbling spaghetti pot adorns the stove: represents taking care of one's own emotional nourishment (self-love).
- Picture 3: a 4th picture featuring a shelf with toys appears next to the ballet bar, representing a choice between practice and play. A choice Aya can now make herself.

However, as soon as the lightball is released and on the way to a picture, the dummy / mother can attract Aya's attention and pull the ball towards her. If successful, she will "infect" the ball (Aya's thoughts) and send it back to Aya where it will cause the inner infection to flare up. The same thing would happen were the player to deliberately send the ball to the mother, because this would be interpreted as focusing on her, obsessing over what she'd think or say, instead of keeping the focus on one's own feelings that need attention. To prevent the dummy from stealing the ball, the player can do a tree pose, balance herself and

thus keep control over her inner light. After a while, the mother will stop pulling and the player is free to direct the ball to the next picture until all tendrils are cut and the path is free. Also, everytime the focus (lightball) goes successfully to a picture, the dummy shrinks a bit until she is smaller than Aya in the end. This indicates that Aya sees her mother realistically now, her perspective of her is not distorted by the unconscious anymore, individuation was successful and reconciliation becomes possible.

Theme 3: recovering playfulness: Inspired by the insight from positive psychology that happiness goes beyond overcoming trauma and healing depression (Peterson 2006), the game's journey concludes with a special focus on recovering playfulness.

After completing the mother scene, the player enters the hallway to the "playroom". This hallway is filled with Chinese lanterns in vibrant reds and gold. Strengthened through the successful individuation process, Aya's lightball is supercharged and while there are many Zombies on the path (remnants of negative thoughts and feelings), they are very easily diffused. Plowing through the horde like this should feel very empowering. The playroom itself is designed like the inside of a pinball machine complete with bumpers and flippers from which the lightball bounces off of. At the end of the room there are four pictures, featuring play activities Aya used to love when she was a child: jumping on a trampoline, roller skating, spinning a top, dancing in the rain. These activities are deliberately chosen to correspond with Aya's play personality (see Brown 2009), which is very physical and movement oriented. In the beginning, each picture is static, showing the activity in its abandoned state. In the middle of the row of pictures there is a strengthtest like the ones found at carnivals.

The goal is to hit all pictures with the lightball, but it is impossible do so directly. Releasing control, sending the lightball out and seeing it bounce off the bumpers and flippers to find its target is part of the process of recovering a sense of play. When a picture is hit, it

starts spinning and the activity on it appears as an animation: e.g. Aya sadly standing on a trampoline is transformed into Aya happily jumping up and down. With each successfully hit picture, the bar on the strengthtest goes up a notch until it reaches the bell on top, indicating that each recovered play activity adds to one’s inner strength.

The game ends with Aya in front of the now considerably expanded bone cage within which her inner child (simply represented by light) is trapped. Hitting the bone cage with the lightball breaks it open. The trapped light is released, and expands until it fills the screen. Fade to white. Transition to a one panel outro comic showing Aya dancing gleefully with a little girl, her liberated inner child.

Conclusion

This paper has illustrated the process of designing the single player, third person Kinect game “Zombie Yoga”. Special emphasis was placed on describing the shift from a more outward oriented approach that focused on Yoga’s physical aspects and anchored the game’s fiction in real-life settings, to an inward orientated approach that focused on the poses’ inner effects and set the game in a purely metaphorical space. This shift towards subjective game design, as marked by the two design iterations discussed above, was a real struggle. A struggle to allow myself to make the game I really wanted to make, to let go of everything that seemed more “objective” and was easy to communicate to potential players as well as potential publishers. It was a struggle to let the themes and concepts that were truly meaningful to me drive the design, inform the metaphors I ended up using, both in terms of gameplay as well as on the fictional level. Why? Because when you make a thing so personal, you make yourself very vulnerable to criticism. What if, in the end, I am the only person who has any interest in this game? The only person to whom it makes any sense? And yet, I wrote this paper to encourage fellow designers to embrace subjective game design. Why? Because I believe “meaningful play” cannot just be the result of a calculated, scientific design process. I believe that for some of the strongest work, “meaningful play” needs to be *part* of the design process.

"The only work really worth doing – the only work you *can* do convincingly – is the work that focuses on the things you care about. To not focus on those issues is to deny the constants in your life." (Bayles & Orland 1993, p.116)

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