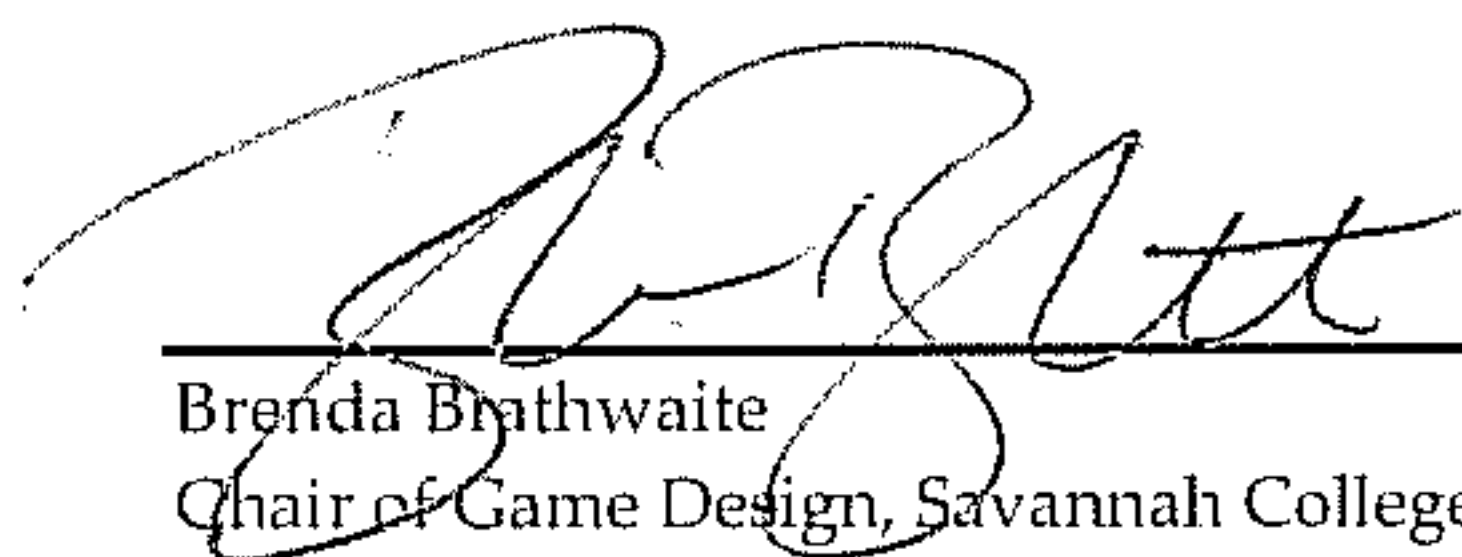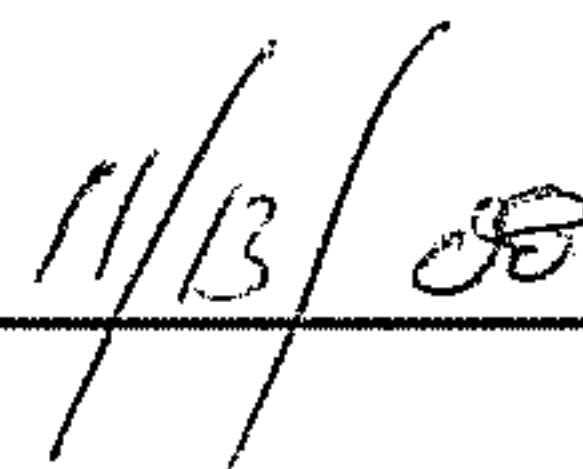Accepted in partial fulfillment of the requirements
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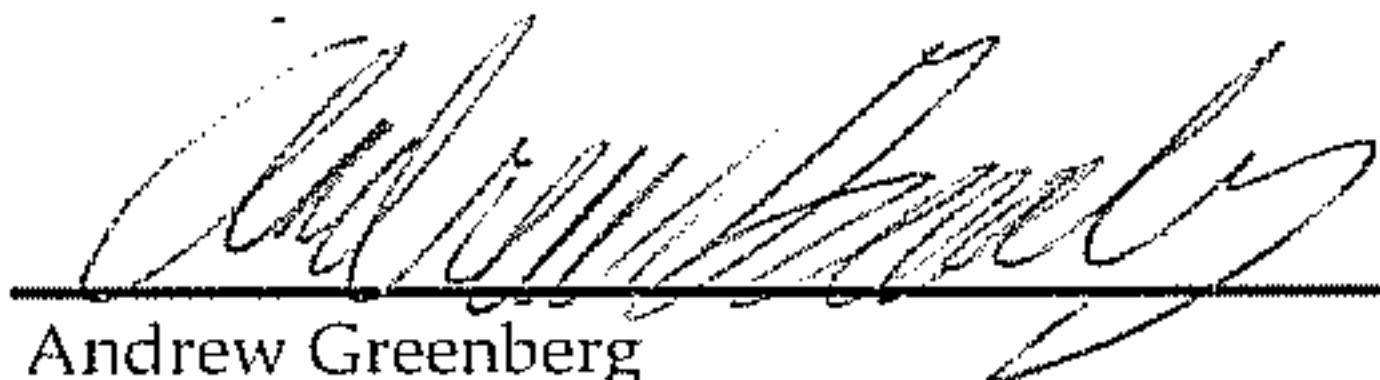
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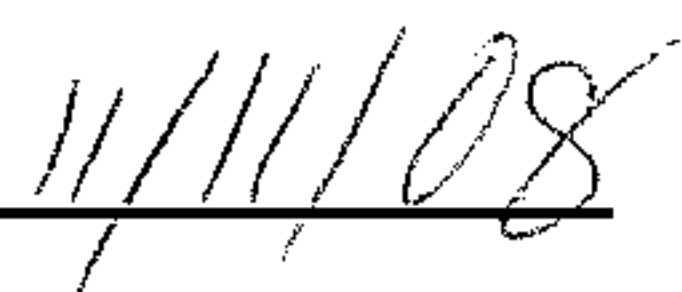Brenda Brathwaite
Chair of Game Design, Savannah College of Art and Design
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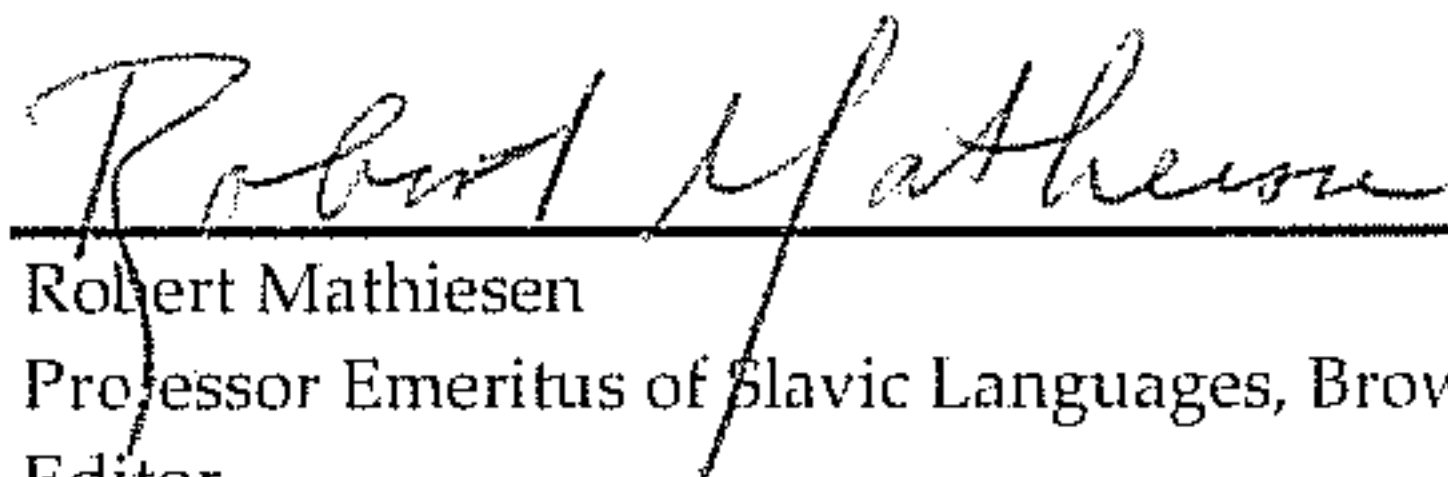
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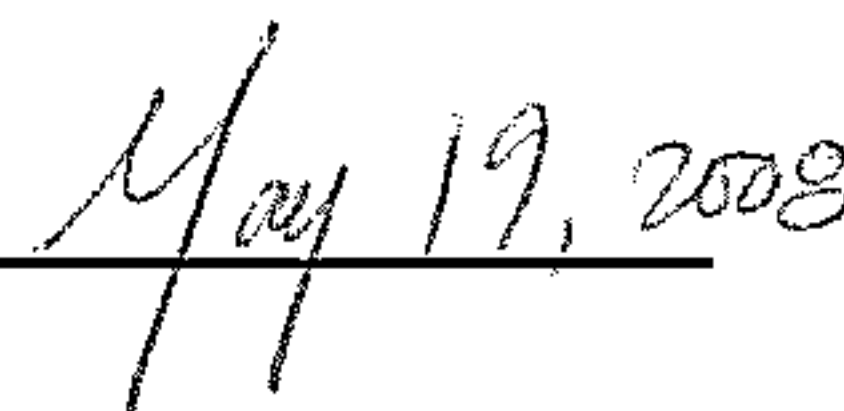Andrew Greenberg
Director, Holistic Design Inc., Adjunct, Art Institute of Atlanta
Topic Consultant   Date

_____   May 19, 2008
Robert Mathiesen
Professor Emeritus of Slavic Languages, Brown University
Editor   Date

The Creation of Emotion in Games:
A look at the Development of Player Emotional
Responses in a Global Environment
Using the Six 'Primal' Emotions

A Thesis Submitted to the Faculty of the Interactive Design and Game
Development Department in Partial Fulfillment of the Requirements
for the Degree of Master of Fine Arts

at

Savannah College of Art and Design

by

Michelle K. Menard

Savannah, GA
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Abstract

Video games are becoming more and more a global form of
entertainment, but still lack the emotional impact of older forms of entertainment
in other media. The objective was to create a system of game mechanics using
the primal emotions which would be universally compelling to all who played.
The study created a board game using parts of the system here created, then
tested it on a group of players varying in age, gender, and nationality. The
emotional data was compiled and compared against the different variables such
as age and gender. In conclusion, the data show that for the limited tester
groups, it is possible to create games using emotionally driven mechanics to
create universally successful, emotional experiences.

Acknowledgements

It is my pleasure to thank the many people who have helped in the long, arduous task of creating this thesis.

I would first like to thank the members of my committee of Robert Mathiesen and Andrew Greenberg for their continued support and assistance and wonderful draconian editing, and especially my chair and advisor in all but name, Brenda Brathwaite, without whom this thesis would not have been possible. Throughout the planning and execution stages, she championed what was a risky and new endeavor, and I have no doubts that the entire project would not have seen its full potential without her continued support and guidance.

I wish to thank Barbara Meier of Brown University whose class on computer modeling and animation originally gave me the idea that video games could be a serious object of study, not just a hobby, and also for directing an independent study in which the roots of this thesis lay.

I am indebted to my fellow students and peers for their help in execution and play-testing of the visual project, particularly to Michael Rodriguez, Joshua Wells, Blair Cooper, and Dave McDonough. I am especially grateful to Sarah Tempas whose continued enthusiasm for Ildamar, champion paper cutting abilities, and obsessive drive to break the rule system has made the board game even better than originally conceived.

I am grateful to the secretaries and librarians of the college for making the department and paperwork run smoothly and for assisting in the collection of a veritable mountain of research documents.

I am indebted to my entire extended family for their continued support during this very busy time including my sister, cousins, aunts and uncles, and especially my husband, James Coburn, who has been unbelievably helpful, supportive, and understanding during the entire lengthy process.

Lastly, I wish to thank my parents, Patricia Menard and Stafford Menard, who have been continuously supportive of my less-than-normal areas of study from high school to graduate school. To them I dedicate this thesis.

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Introduction

"The emotions are all those feelings that so change men as to affect their judgments, and that are also attended by pain or pleasure."[1]

In comparison to other available forms of mass entertainment – film, music, theater, novels, and the like - video games have decidedly fallen short in one category: the creation of a dependable, audience -appropriate emotional element, one which the designers can count on to occur time and time again. This is in some ways even more deplorable as games provide interaction along with entertainment, and should, by all logic, be more capable of creating an emotional response in their players than forms that are purely static.

All screen and scene writers know that to keep an audience involved with a production, a steady stream of emotional stimuli must be provided. All mass forms of entertainment have this in common, and an audience member's choice to continue watching or to resample a given piece of entertainment is often in direct proportion to the emotional stimuli provided. A movie which continues to provide surprise and suspense is going to be enjoyed many times later whereas one that fails to engage its viewer emotionally on the first viewing will not. It is

not only for plot and characters that people watch a movie - it is also for the emotional content that they experience as they watch it.

It is here where games can stand to benefit. While there is nothing to say that a game has to be about emotion for it to sell, the creative use and deployment of emotion can hook a player for longer hours and many sequels to come. A book may be about plot development and character interactions, but it is the emotional responses and empathy of the reader which keeps him turning the next page. Creating this emotional link between the form of entertainment and the person being entertained is critical, if the audience member is to return to the product, whether a book or a video game.

While ensuring a return to the product, well-crafted emotions can also reach a larger audience than plain script or animation can do alone. The mass entertainment market is a world-wide one, and video games are no exception. Players reside on all populated continents, and speak any number of languages, far too many to be written for during production. This leads to localization; when repeated for every game in every targeted language, leads to much wasted time and money. Would it not be better to have a universal system which could appeal to the emotions of all players regardless of their language?

Besides language and cultural barriers, there is the other obvious barrier of gender. Many forms of entertainment are billed as either "for girls" or "for

boys", with a few sandwiched neatly in between. With rising production costs, a product that appeals to both genders equally would obviously reach a wider market than one that does not. Here is another area in which clever use of emotions can help bridge the gap between what 'appeals' to men only or women only. Clever manipulation of stereotypical gendered emotions and the greater use of less stereotyped ones can help pull and keep an audience without alienating people from familiar bounds of their culture.

In order to streamline and create the most efficient and reachable system, only those emotions that cross all cultural bounds should be explored and utilized in game design. Extensive research in the fields of psychology and biology, starting with research of Charles Darwin in the 1800s through Paul Ekman's work with tribal nations in the 1970s, has identified six basic, 'primal' emotions that exhibit recordable likenesses across all cultures. These six are: anger, fear, joy, surprise, disgust, and sadness. They, and only they, have like meanings, and more importantly, like stimuli and signifiers, across all bounds of language and culture.

If, then, designers could harness these six primal emotions into a reusable system, they could create a universal, world-wide game that would reliably elicit the same emotional reactions in all players regardless of culture, age, gender, or

language without much regard to localization, thereby creating a emotional experience on a massive scale .

As games seek to reach a wider and more diverse audience worldwide, it is important to understand the biology and culture of human emotion, and how it can be deployed to draw and sustain this global audience of players.

Background

An Emotional History of Games

"There's a legitimate reason to name Floyd from Infocom's old text adventure PlanetFall the greatest sidekick of ALL TIME. After all, when most videogames lacked character, he came along and charmed you with childlike devotion. He proudly tells you that he once helped someone sharpen a pencil. My favorite Floyd quote: Whenever he catches you saving your game, he lights up and asks "Oh boy! Are we gonna try something dangerous now?" When Floyd died in order that you can complete the game, it was among the most moving deaths in videogame history. People cried."[2]

If you ask most younger players today about emotional moments in games, an overwhelming number of them will point to the death of Aeris in Square's *Final Fantasy VII* as the defining moment.[3] However, ask an older gamer and the answer lies fourteen years prior in 1983, with the release of Steve Meretzky's *Planetfall*.

Even before the advent of all-important graphics, games were exploring the depth to which emotions could be elicited from their players. Granted, many games at the time such as *Asteroids* and *Missile Command* were more about thematic war material and did not try to create an empathetic link with the player. Later with the advent of the text game, a broader range of players began

to feel deep attachment to characters and have emotional involvement with the plot.

Planetfall was released by Infocom in 1983. In it, the player took the role of an Ensign Seventh Class, assigned the menial task of mopping floors until explosions on the spaceship force him to crash land on a deserted planet. In the style of most text-based adventure games, players collected clues and used inventory items to solve puzzles, and received a score for solving puzzles well and completing all the optional objectives. (Fig. 1) It was not for any innovation in these areas that earned Planetfall its high regards, but rather its NPC (non-player-character) Floyd, a child-like robot the player finds on the planet. This endearing robot follows the player around, offering comic relief and cute quips along the way. However, as the plot progresses, it becomes apparent that the player needs an important card from within the Biolab, and Floyd sacrifices himself to retrieve it. As Floyd dies, the player sings a ballad to him, reminiscent of the death of the robot HAL from *2001: A Space Odyssey*. The courage and selflessness shown by the little robot left many gamers in tears, and remains for many one of the most moving moments in games.

In 1993, Infocom released another adventure game, *Return to Zork*, the first game in the Zork universe to support a graphical interface. Players were now asked to point and click on items and people instead of using the ubiquitous

adventure game text parser. While the game made extensive use of filmed

actors, many famous at the time, the emotional interest of the game does not lie

with the characters or the allusions to past Zorkian events, but rather with the

interface. Zork and other adventure games used a text parser to run the game,

making players type in a verb and noun combination to interact with the world.

Now, instead of typing in "ask about < insert noun>", players had the option of

clicking on a row of faces, each depicting a conversational emotion, such as fear

or anger. Players now had to interrogate the NPCs by using a combination of

different emotional tactics to receive vital clues and information. Fans still

debate whether there was any advantage to clicking one emotion multiple times

or changing emotional cues during the playback of a filmed sequence. (Fig. 2)

The 1970s brought a change to the narrative gaming front, with the advent

of the computer role-playing game. RPGs, as they became known, had been

widely popular on the pen and paper front for years, such as *Dungeon and*

Dragons, an RPG by Gary Gygax and Dave Arneson.   Players now could pick

and choose an adventuring party of characters to play, choose upgrades, pick

level-up bonuses, and decide many other custom characterizations for their game

characters. The often heavily narrated game combined with strong

characterization led many players to form strong emotional attachments to both

the game and individual characters.

As discovered by my student poll and also claimed in Carrie Gouskos' article on "The Greatest Games of all Time", *Final Fantasy VII* is referred to time and time again as having either the most shocking or saddest moment of video game history. This early PlayStation game was released in 1997 and chronicled Cloud Strife and the group AVALANCHE as they attempt to save the planet from a ruthless corporation and psychopathic ex-soldier. The scene in question occurs about a third of way through, when one of the villains, Sephiroth, impales the innocent Aeris as she prays to the planet for help. (Fig 3) Players worldwide shouted foul as this important player character was killed off so quickly and unexpectedly. For many, this created a personal grudge against Sephiroth; no longer were they only saving the planet for the characters in the game, they were also saving it for Aeris and themselves. However, there were still a few players who not only didn't care about the death of Aeris, but even laughed outright at the overly dramatic scene.

A few years later, Square released another RPG often cited for its heart-wrenching ending, *Final Fantasy X*. Here, Square took a Romeo-and-Juliet approach to the plot, foreshadowing the ending quite clearly through many of the main plot points, but giving the player a false sense of hope that he could indeed make a difference to the outcome. For the most part, this approach had one of two outcomes: players were either distraught that they couldn't change

the course of 'destiny', or they were supremely annoyed at the designers for basically 'leading them on'. Whichever of the two, players were moved often to tears by the doomed love story or sense of helplessness. (Fig. 4)

These examples showcase a few of the more effective games of the recent decades. Not all games have been as successful in their attempts at arousing empathy in their audiences. One such game, often touted as the very worst video game of all time, is *E.T. The Extra-Terrestrial,* based on the movie of the same name. Released in 1982 for the Atari 2600 system, the game attempted to piggy-back upon the success of the movie and use the emotional attachment people already felt towards the endearing, gawky alien. In the game, though, the characters were dull and not at all akin to their movie counterparts, and the story itself deviated full-force from the proposed vision. Instead of feeling any sort of empathy or pity for E.T., players laughed at, derided, or became incredibly frustrated with the poor story and gameplay. The game sold nowhere near the expected amount, leaving Atari with literally millions of unsold cartridges and just as many angry fans, and is credited with contributing to the bankruptcy of the Atari giant that soon followed.

In 1988, the Nintendo Entertainment System (NES) released its own blundering video game, *Advanced Dungeons and Dragons: Heroes of the Lance.* Based on a well-received campaign module as well as the highly acclaimed

Dragonlance novels, the game follows the eight characters from the book as they attempt to find an ancient relic and destroy the evil dragon Khisanth. (Fig 5.) While utilizing strong ties to other media and a wide variety of likeable characters, the game was an utter disappointment, failing to evoke any kind of emotional response so prevalent in both the campaign and novel. Players familiar with the typical RPG play experience were especially let down by the complete lack of emotional involvement with any of the characters and sub-standard gameplay experience.

Newer games are no stranger to the emotionless dirge many players encounter, hinting that the blame lies not in poor processing power or sub-par graphical quality. From laughing at 'heart wrenching' death scenes to a complete lack of immersion in the main quest, gamers have been forced to continue slogging through less-than-stellar play experiences.

Bethesda's *Elder Scroll IV: Oblivion*, released originally in 2006 for the personal computer as well as the XBOX 360, was generally well received by both critics and players alike. The developers hoped to create a tighter storyline and more fully developed characters, and the general response was that they succeeded. However, the game required that the player is in no way required to complete or even start the main storyline. Or talk to any NPC. Or really do anything at all. *Oblivion* lets the player go freely wherever he wishes, and while

this can be great for the feeling of being immersed into a fully functioning world

and giving the player a full range of choices, it is abysmal for the creation of any

kind of traceable emotional response in the player which would be both

meaningful and comparable across a world-wide sampling. There is no

guarantee now that a player will meet a certain character, have any empathy for

a quest giver's problems, or even care about the larger problem at stake in the

world. Many players confess to have never even started the main storyline,

instead just running around the world leveling up their character at will. If a

player were to begin the main plot line, its convoluted story arcs and rash jumps

in reason and motive would destroy any attempt at creating emotional links

through character or story. So while there is a set of happy, emotive players, the

route of *Oblivion's* gameplay does not guarantee that this will be a universal

phenomenon for all of its players.

Released last year by Sony Entertainment, *Heavenly Sword* was a game that

sought to create a movie-like experience in a video game format. While also

generally well received, the game did have one notable flaw in that the

supporting characters were far more effective and successful than Nariko, the

main character who the player controls. While the game is littered with

moments of pity and joy provided most notably by characters Kai, Nariko's

adopted sister, and Roach, the main villain's mentally retarded son, Nariko fails

to engage the player on the same level. (Fig 6). Her interactions with her father are forced, unnatural, and often contradict her inner monologues and flashbacks, and many a time her conversations with enemy fighters leave the player confused or even slightly uncomfortable.

This all leads to the question of how can developers create an emotional response in their players and avoid adverse situation like these? What makes a character empathetic to a player? How can gameplay or story create an emotional link with the player? To answer any of these, it is important first to look at the basic biology of human emotion, and how emotions can be universally studied and applied.

An Overview of Emotion

"[realities of emotions] are complicated by the by the fact that our ideas about emotions can help construct their own reality. …what I do and feel when angry depends in part on what I conceive anger to be."[4]

Vincent Van Gogh once said that it's important to "… not forget that the little emotions are the great captains of our lives and we obey them without realizing it."[5] While it is true that most philosophers and cognitive-science researchers today will agree that emotions are one of the primary driving forces for human motivation and interaction, there is as yet no unified view of exactly

how emotions and the mind are interconnected. The writings of Plato, Aristotle,

Descartes, and Hume present theories of how the emotions are connected with

the brain, mind, body, and soul, all of which recognize the unique role that

emotions play in human development, but do not allow one to construct a

working, complete model.[6] Despite the large amount of published research from

the 1970s – 90s, no single, unified theory has been upheld.

This, however, is not necessarily a deterrent, as it might at first. As any

physicist working with general relativity will tell you, a proven law is not

necessary for work to continue on a subject, as it is still possible to make

generalizations and draw provisional conclusions that cover the majority of cases

from a theory.

One of the first and more famous of the theorists on the role and

development of emotions was Charles Darwin, who correlated emotions to

instincts as a basis for his (at the time) radical theory of evolution. Darwin's

basic argument rests on the observation that many creatures in the animal

kingdom exhibit expressions of emotion that are strikingly similar to those of

man, and so it is possible that man could therefore be related to these creatures, if

not directly descended from them. "…the study of the theory of expression

confirms, to a certain limited extents [sic], the conclusion that man is derived

from some lower animal form, and supports the belief of the specific subspecific

unity of the several races."[7] Here Darwin is also formulating the theory that the

different races of human beings, regardless of skin color or geographic location,

are also related and descendent from the same stock. It could then be posited that

the languages and expressions exhibited in one subspecies of man would be

similar to and understandable by other races of man, even the "savage races", as

Darwin termed them. Though he did not say so directly, Darwin implies the

existence of a universal theory of emotion, applicable to all humans regardless of

gender or race.

Thomas Brown, who published his work *Lectures on the Philosophy of the*

Human Mind in 1820, is credited with introducing emotions as a worth-while

field of study in academia. His work was the first to conceptualize and record

emotions as an object of scientific study, discarding older notions of 'passions'

and 'affections'.[8] While introducing new terminology might not seem like a

large step to take, at the time it was a radical move from regarding emotions as

objects of the spirit and soul to treating them as objects of mental states, opening

up opportunities for scientists and not just clergymen to study them. Some of

the main tenets of Brown's theory of emotions that furthered the development of

subsequent theories were as follows: emotions could be studied as a mental

science; emotions could not be precisely, verbally defined, but recognized by a

feeling; and a distinction should be made between sensations, which are bodily

functions, and emotions, which are mental functions.[9]

Alexander Bain took Brown's research one step further in 1873. Following

both Brown and Darwin, he posited that emotions were really the mental side-

effect of what was in reality a change of state in the central nervous system.

While less than popular in his day, Bain's approach to emotions forged the

bridge between the mind and body, and showed how the two were intertwined

and connected, rather than the body being a passive instrument of the soul.[10]

Morris Ginsberg continued the debate of the role of emotions in the body

and in evolution in 1926 with his article "Emotion and Instinct". While he

spends a good amount of time criticizing and critiquing his contemporaries'

works, especially in their over-reliance on Darwin, he does put forth a few ideas

of his own which revolve around what would later be known as the 'primal

emotions': anger, fear, surprise, joy, sadness and disgust. Ginsberg postulates

that emotions are triggered when:

1. normal responses fail or are
   unavailable
2. instinctive actions are obstructed
3. prolonged action is necessary
4. an object of impulse is removed
5. a subject is left in a situation for
   which he is unprepared.

He assigns the emotion of fear to his first postulate, using the example of an

infant being dropped, or when flight from danger is obstructed. Anger he

applies to the second postulate, as it aimed at the subject overcoming some form

of opposition, and not primarily at destruction. Disgust is also applied to this

postulate, as Ginsberg points out that a feeling of repugnance would not be truly

felt if it could be cleared away quickly, so some form of opposition must be

present. Surprise or wonder he carefully attributes to it as well, feeling that is

there is no obstruction there would be no room left for curiosity to take root.

Sadness is described as a function of the fourth postulate, with most sorrow

occurring when an object of affection is removed, either temporarily or forever.

Joy he gives to the third postulate, stating that the emotion arises when a subject

is able to adapt unimpeded to a situation or performs some ability easily but not

automatically. He follows this with the statement that for an emotion to be

prolonged, a single impulse is not enough and the subject must experience a

"certain variability and play of impulses".[11] What Ginsberg makes as a side note

here is actually a very important point for the development of emotions in media

such as games, and one to which I will return in later sections.

More recent theories of emotion have begun to focus less on classification

of emotions and what could constitute an emotion, and more on the *purpose* of

emotions. Other papers delve into what causes emotions to occur in the first

place. A basic idea of modern theories is the concept of the *formal object*, a

property that the emotion assigns to a given target or focus, and one that is

essential to the definition of that particular emotion.[12]   An example de Sousa

provides in his Standard Encyclopedia is that of a dog. The author sees a

hypothetical dog, takes into account its snarling face, sharp teeth, and bark, and

assigns these features to it as being frightening. Therefore, his perception of the

dog as frightening creates his emotion of fear, rather than any other, say, disgust.

This allows then the discussion of whether an emotion is appropriate or

inappropriate to a given situation, by evaluation of the formal object. As he

rightly finishes, if the dog blocking his path is a tiny shitzu, his fear would be

mistaken and the emotion would fail to accurately fit the formal object.

A last concept to note is that emotions *are not* feelings. While in the

English language (and surprising, not often in other languages) the two words

are often interchanged in colloquial speech; they both refer to very different

physical and mental activities in the scientific meanings of the terms. Emotions

are produced from evaluations or appraisals of a situation, either subconsciously

or consciously, and can be rationalized by outside viewers by noting the formal

object. Feelings, however, are generally known as states of consciousness, and

arise from emotions, desires, or sentiments.   Feelings can also lack a defined

formal object, which emotions, as defined by modern standards, can not.

Richard Bagozzi writes in his paper "Goal-directed Emotions", published

in 1998, that emotions occur to express communication from an individual either

to the cognitive mind or to the outside community whenever an ongoing plan

changes or the evaluation of a plan changes. Negative emotions, or dysphoric

emotions, result from failures and inabilities to achieve desired goals, while

positive one, or euphoric emotions, result from the attainment of goals. His

paper backs his claims using a study of subject-defined dieting goals, either to

gain, lose or maintain weight, in which the subjects were then asked to keep

track of their anticipated and actual emotions. However, only the people wishing

to stay the same or lose weight were relevant for the results of the study. The

study's results showed that people who expected success and positive emotions

were successful in their goals, with losing weight having higher feelings of

positive emotion.[13] Bagozzi's theory leads to some interesting corollaries for

directing player emotion, not by attempting to define end results in the game

itself, but by directing player anticipation from the onset.

In a summary of Parkinson's book *Ideas and Realities of Emotion*, James

Averill refines the idea of emotions as a form of communication. The two most

interesting points for this study are: Emotions are a form of communication

primarily used to inform others, and that emotions are interpersonal, not private

events. In this way, emotion is likened to any spoken language: people talk to

themselves in their mind and then express only a small portion of this to others,

much like emotions, which are experienced first in the mind and then expressed

in some form to others. Parkinson argues that it is not the appraisal, but the

desire to communicate with others, that drives the causations of emotions.

While Parkinson does not cover any biological or social aspects of emotions, the

idea of emotions as a form of communication can be traced back even to Darwin

and the theory of evolution of man, so it would stand to reason that as a form of

communication between members of a species, some basic biological similarities

would probably exist between all members of the species that would allow them

to understand the given message. This basic idea is continued by some

researchers in the study of emotions as a universal human phenomenon.[14]

So, in the end, what exactly is an emotion? While there are three basic

schools of thought — emotion as a physiological process, computational theories,

and more recently, dynamical-systems theories — there exists no nicely

packaged 'unified theory' of emotion. One point which de Sousa makes is that

regardless of which school a theory falls into, most modern theories take into

account a series of nine basic points about emotion:

1. emotions are typically conscious phenomena; yet
2. they typically involve more pervasive bodily manifestations than other conscious states;
3. they vary along a number of dimensions: intensity, valence, type and range of intentional objects, etc.
4. they are reputed to be antagonists of rationality; but also
5. they play an indispensable role in determining the quality of life;
6. they contribute crucially to defining our ends and priorities;
7. they play a crucial role in the regulation of social life;
8. they protect us from an excessively slavish devotion to narrow conceptions of rationality;
9. they have a central place in moral education and the moral life.

De Sousa summarizes many of the recent publications in his work for the

interested reader who might wish to delve further into the subject.

The Concept of Universalism

"What does seem well established in the light of cross-cultural research is that a small number of emotions have inter-translatable names and universally recognizable expressions. According to Ekman and Friesen (1989) these are happiness, sadness, fear, anger, surprise, and disgust [15]

As de Sousa states here, many researchers are looking into how emotions develop and are interpreted across different cultures and races, and if any universals can be found. By universalism, we mean a system of expressions and identifiers that would denote the same emotions across all cultures regardless of language spoken or any other cultural determinants. A universal emotion would have to be hard-wired in humanity's genetic inheritance and physiology, which differing cultural norms cannot completely override.

Culture, however, is what drives most of the argument about universalism. Scientists disagree sharply over to what extent culture determines emotions and emotional responses. Paul Ekman, one of the most eminent psychologists who studies emotions, facial expressions, and their possible universality, made a study on a group of isolated, non-literate tribesmen in Papua New Guinea. In it, he showed photographs of facial expressions portraying different emotions to the tribespeople, where all of the photographs were from people of cultures the tribe had not yet had any contact with. His

results showed that for the six basic emotions — surprise, happiness, anger, fear, disgust and surprise — the tribesmen had no problem in naming the correct emotion, thereby validating theory of universal facial expressions.[16] Ekman here points out that these basic emotions are grounded in biology, and that culture only defines how these emotions are revealed or concealed. Culture does not redefine the basic meaning of 'anger' or 'joy'.

One of the most significant differences between cultures and how they interpret emotions is whether the culture is *Independently*-based or *Interdependently*-based, which can be crudely generalized to West versus East respectively. Bagozzi is one researcher studying the effects of this difference on culture and gender between East and West. In his paper "The Role of Culture and Gender in the Relationship between Positive and Negative Affect", he hypothesizes that Western societies tend to experience their emotions in 'oppositional terms', whereas in Eastern cultures it is in terms of 'balance'. It is not that the emotion is different from one culture to the other, but rather the expression and evaluation of the emotion is handled differently because of the basic philosophical upbringings of the different peoples. Bagozzi also mentions that differences in the expression of emotions between the genders result from socialization through culture, not from anything fundamentally different in biology or ability to experience the same emotion.[17] In fact one of the larger

differences lies in the use of words for the emotions themselves: women speak

more openly and diversely about their experiences of emotions than men,

making it *seem* as if women were more 'emotional' than men.

Agneta Fischer tackles the role that gender and cross-cultural labeling

play in defining emotion in her article "Emotion Concepts as a Function of

Gender", published in Russell's *Everyday Conceptions of Emotion.* She combats

the stereotype that women are 'more emotional' than men, stating that:

> "…there is no convincing support for the idea that women
> experience the most prototypical emotions, that is, fear, anger,
> happiness, sadness, and disgust, more frequently than men do,
> …however, some empirical evidence that women experience some
> specific emotions, such as sadness, fear, and uncertainty, more
> frequently and intensely than men." [18]

She does not mention the small contradiction involving sadness and fear, but

does point out that these emotions, associated with the subject being powerless,

are labeled as 'feminine' emotions and the subject feeling such emotions labeled

as 'emotional' in a negative context. Boys should *not* cry and be brave, and girls

should *not* be angry or aggressive. Men are expected to be clumsy and inept in

the world of emotions, whereas women are expected to be adept at dealing with

theirs. As no scientific backing exists to prove there is a biological difference

between the two genders in the experience of the primal emotions; this is all due

to cultural upbringing, which is repatternable and overridable. It seems that the

problems of dealing with emotions across genders arise not out of experience,

but out of expressing and labeling that experience in a social context. Where

games are concerned, perhaps this is not as detrimental as it seems. In games

played solo or across an internet connection, where there is no direct line of

visual or verbal communication, there exists no problem, as communication of

expression is null. Only when a game is multiplayer face –to-face or with live

audio and visual feedback would this gendered expression of emotion be

apparent, but not necessarily detrimental to the creation of a universal system of

emotion mechanics.

Another study of universal emotions was performed by Antony Manstead

of the University of Amsterdam. He examined how young children interpret

emotion and facial expressions, studying universality across not only culture and

gender, but also age. It has been found that children as young as twelve months

already possess the ability to recognize, and appropriately react to, positive and

negative facial expressions. This gives more credibility to the theory that

knowledge of emotions is at least somewhat innate. Some error, of course, does

occur when young children are asked to specify and label exact facial

expressions. However, the interesting part of the study, originally published by

Russell and Bullock in 1985, is that, even with children as young as two years, the

errors were systematic in such a way as to suggest that emotional knowledge of

facial expressions is hardwired. See Fig. 7. This chart was empirically derived

from analyses of facial expression judgments, reported data from cross-cultural

adults and children, and semantic similarities made by Chinese, Japanese,

Gujarati, and Croatian subjects. Photographs were shown to these subjects of

facial expressions, and they were then asked to classify them into one of the

categories on the chart. Errors were then predicated to be within one of the two

neighboring categories of the 2d chart, regardless of the age of the subject. The

results proved that while young children had a broader definition of a given

emotion than older ones, the errors were systematic on the graph and in line with

predictions, showing that some knowledge is innate.[19]

This small sampling shows that published research on the subject

supports the conclusion that a universal system of emotions does exist, at least

for experience and facial expressions, if not for direct verbal expression and

labeling. Taking these studies and their findings into account, it should be

possible then to define a set of postulates for a universal system of game

mechanics capable of generating the primal emotions that would cross the

boundaries of culture, gender and age.

Impact of Player Emotions

But why would a universal system, as posited in the previous chapter, be desirable? Is the creation of emotions in games really all that important or necessary? I have, through research and observation, identified five key areas in which having an integrated emotional mechanic employed would be highly beneficial not only for the player, but for the game developer as well. They are the Global Industry, The Gender Divide and Marketability, Sustaining Play, Casual versus Hardcore Games and the Broader Audience, and Player Immersion. The five sections of this chapter will consider them one by one.

1. The Global Industry

"In terms of revenue, the online games category is currently the largest category out of the three main online entertainment markets (music, games and video). Strategy Analytics estimates that the global online games market generated $3.8 billion in 2006 and projects that the market will grow with a compound annual growth rate (CAGR) of 25.2% in the 2007-2011 forecast period to reach $US 11.8 billion and represent approximately one third of the total games software market by 2011." [20]

The first area in which it is important to consider the breadth of emotions is in the online global market and importation and localization of console and PC games. In regards to the online global market, Massively-Multiplayer Online Games (MMOGs) are an obvious target which could benefit from a better understanding of cross-cultural emotions. Besides streaming the exact same content — minus text translation — to all players across the globe, some MMOGs even provide areas for direct contact between these players of different nationalities, for example, the International districts found in each Guild Wars outpost. In these outposts, players from any country can meet to join up together to play the game. A player can also travel to another continent's dedicated district, such as Europe or Asia.

As an experiment to see how the game differed while playing with a global audience versus a strictly American one, I decided to travel to various International and American districts and see if and how the play differed in each — it did. Time of course was a factor here, so I planned my voyage to be around 4pm EST and 9pm GMT, figuring this would be a good stretch of time to catch a wide range of players, and I decided to stay in the outpost of Lion's Arch, a heavily frequented and trafficked area for players of all levels.

Indeed, many players were online during this time period. However, an interesting trend emerged. In all the active American Districts (1 – 4) at the time,

there were players actively interacting, questing, and chatting together. The same was true of each European and Asian district I visited, for all languages spoken. However, the International District, the official avenue provided for players to interact with others from different countries, was not only infrequently visited, but the chat window was never used there, and players did not attempt to interact in any way – questing, trading, chatting, etc. Ninety percent of the characters present were also obvious English speakers, to judge by the long descriptive names they had given themselves, which prompted me to wonder, why aren't any other players using the International District? Why only a majority of English speakers, who still won't interact with each other, and is there anything that could be done to promote a global play experience? Obviously the designers allow and invite such play, but is there any way to encourage greater participation?

Another avenue of global play is through the importation of games, primarily between America, Europe and Asia, which is becoming more of a trend with newer releases. However, these games must undergo a costly process of localization, where texts are translated, models changed, various graphics updated, and even gameplay tweaked for the intended audience. This all amounts to a large amount of time and effort, but yields sometimes shoddy end results. Who has not had a laugh at the expense of Zero Wing's faulty

introduction? See Fig. 9. What about Japanese gamers angered at the inclusion of optional bosses Emerald and Ruby Weapon in the Western release of *FFVII,* but not in the Japanese? Or something as seemingly minor as changing the color of Crash Bandicoot's eyes? Obviously, these changes are made to not only make the game understandable to a foreign audience, but also desirable and enjoyable. However, what if there was a way to plan for a universally strong emotional impact from the beginning through both graphics and design, a way which would then help cut down on localization costs?

2. The Gender Divide and Marketability

"Moreover, the typical female preferences in game, such as an interesting story, entertaining characters and good game play, is [sic] *often considered to be a request from all kinds of players. In that perspective it is possible, with thoughtful design, to create games that appeal to both male and female players without any special treatment.(Pinckard, 2003)"[21]*

Gender and its role in game design is no new topic in game design research, but one that is still predominately attributed to a select handful of writers, the most prolific being Sheri Graner Ray, starting with her book *Gender Inclusive Game Design: Expanding the Market.* When studying gender in either physiology or sociology, it is easy to balance a number of studies that support

either of the genders as being better at something than the other, against a

roughly equal number of other studies claiming they are equal. It is also not hard

to find unverified statements in research that claim to be fact but are nothing

more than undocumented opinion based on stereotypes. Whether culture or

social upbringing creates any bias in these studies is unproven, but basing any

sort of theory on such a wide and vastly incongruous body of work is, at the very

least, difficult.

From an emotional standpoint, there exists no proven difference between

the way men and women experience the physiology of emotion, but only in the

ways culture and society has imprinted the expression of emotion upon them.

So while physically there is no difference, stereotyped bias does unfortunately

exist as to what a 'feminine' and 'masculine' emotion and who would ultimately

be attracted to each emotions might be. In light of this, and allowing that

generalities of bias and stereotypes are only averages and do not hold up for

every individual, it seems that perhaps the best way to include both genders on

an emotional level is not to favor any one emotion over another, but to include a

balanced account of the 'feminine' and 'masculine' emotions — at least until

cultural biases of gender stop being imprinted on newer generations. Trying to

appeal to either gender by specifically using these stereotyped norms will only

produce a product that might appeal to some small audience, but will invariably

alienate the 'non-average' individuals as well as the opposite gender, neither of

which is desirable for marketability.

3. Sustaining Play

"Most video games are like toilet paper. Buy a game, use it once, then flush it. – Duane Alan Hahn"[22]

Although games are quickly becoming the highest grossing form of

entertainment in America, as elsewhere, games in general do not generate the

same sort of profitable mass 'addiction' that other forms of entertainment

currently favor. When or even *if* a player finishes a game (there are still a large

percentage that do not), the percent of players who will replay that same game is

still very low. Yet these same people will rewatch a movie, diligently rewatch

and own every episode of a TV series, reread a book, or listen to the same CD

hundreds of times and still enjoy themselves every single time. There is nothing

fundamentally different in the respective audiences; indeed, they are often the

same exact people. Why then do players not feel the same draw to replay games?

When it comes to sustaining a player's involvement with a given game,

many times it seems as if the ready response is either to throw in either a

multiplayer option or a mod toolkit for the engine. Both of these things can help

if done well, but they do not tackle the immediate problem, and can actually

adversely dilute the original content.

Adding a multiplayer option as a non-essential or freestanding part of the

game is the weakest method of attempting to keep a player's attention[23]. A

player might wish to play the game with a friend if the opportunity arises, but if

the multiplayer option does not offer anything new for the player to experience

or add any benefits, then there is no impetus for the player to continue. *Marvel*

Alliance is one such game in which the multiplayer does nothing to change the

actual experience of the game and it provides no reason for the player to return.

However, games like *Halo 2* or *Team Fortress*, where the entire game is built

around the multiplayer, with any single-player function being strongly

secondary, have proven themselves to have high continual followings of players.

Then multiplayer can be a great boon to the repeatability of games, but often it is

just a tacked-on addition that was poorly conceived of in the beginning, and will

only weaken the original game.

The Achievement System, part of XBOX Live pioneered by Microsoft for

the XBOX in 2002, has an interesting take on creating replayability. Players are

prompted to replay their game titles in order to unlock special and often hard-to-

get "Achievements", which are then displayed for others to see. The system is

available for single-player as well as multiplayer games, and gives players points

for completing optional objectives not necessarily part of the main game experience. Some gamers have found themselves prompted to replay a game they bought many years ago in order to increase their total gamerscore point total.

However, even Achievements are not the perfect solution. As many disillusioned players remark upon the IGDA Forum Boards[24], while for some games Achievements are well implemented and help extend play, for others they are quickly tacked on and 'commoditize' or cheapen the experience. Instead of playing the game for the whole experience it was originally designed for, some players only see the tiny flashing words "you got 10 points!" and direct their play only through the Achievement list. Others feel that the system is unfairly weighted to online play, thereby segregating the people who for whatever reason did not want to pay Microsoft for an online membership. It does have a certain reminiscent feel of the High Score system of older arcade games, and players are split on this as well as on whether it is a well-conceived or detrimental addition to the overall game experience.

Mods and Engine Toolkits are another method some developers are using to try and expand the replayability of their games. This is arguably, when well done, one of the more successful live extenders of any game. Now, not only can gamers go in and customize the official campaign to suit their current need, but

the developers have given the populace the tools to be complete designers of their own experience. Players can create custom weapons, characters, levels, or even whole campaigns either just for themselves or for the entire world by posting their finished work onto hosting websites. So not only do mods increase the content and the life expectancy of the game, they also give modders a feeling of accomplishment and pride when their hard work is well received, praised or even financially awarded by a larger community. *Unreal Tournament* and *Neverwinter Nights* benefited greatly from well-designed mod toolkits provided to players, and these older games are still being constantly updated and enjoyed by fans. Will Wright's *The Sims* is another game that has thrived upon the success of player-created mods and expansions many years after its original release.

Mod Toolkits though, like everything else, are not the final answer either. Many players simply do not have the time or technical/artistic know-how to build their own content, nor the internet connection to download someone else's. The player's experience is now completely dependent upon the competency of the modder, and with sites lacking any sort of formal content control, this experience is highly variable and not always rewarding. Mods will inevitably build a core following of content creators and developers, but without the

guarantee of a meaningful or enjoyable play experience, many players do move

on to other products.

Why do people rewatch those old films dozens of times, even when they

know the entire script and timing of the film by heart? The answer lies in one of

the fundamental problems with many game designs, and with bad works of

entertainment in general.

Aristotle acknowledged this same problem in his treatise on poetics and

theatre, and yet writers and designers still make the same mistakes centuries

later. Simply put, games are entertainment. Like any form of entertainment —

written literature, theatre, movies, etc. — they can also have a secondary agenda,

preach a message, be artistic, tell a story, or any other number of things. But just

as Aristotle criticized his contemporaries all those years ago, "The Spectacle,

though an attraction, is the least artistic of all the parts, and has least to do with

the art of poetry."[25] Spectacle, which basically equates to anything flashy thrown

in to 'oo' and 'ah' the audience without actually providing meaning of any kind,

is unfortunately rampant in games. There is spectacle in the overdevelopment of

graphics, spectacle in effects, spectacle in add-ons and decorative downloads,

and spectacle in design. Surprising the audience with twists and turns, just for

the sake of surprising them and not for any added meaning or content is outright

weak design. Surprises of this kind do not create replayability, rereadability,

rewatchability, nothing.   Do not, however, confuse surprises with well-conceived plot twists – the two are separate things that less experienced or younger writers often suppose to be one and the same. Plot twists are foreshadowed and have deeper meaning and complications for the narrative and characters. Often, as Aristotle would say, they enhance the audience's ability to attain catharsis. Surprises surprise once, only once, and then are finished.

What does create replayability in really any medium, is firstly, entertainment itself, and secondly, immersion. Books are reread and movies rewatched because the audience member is experiencing a well-crafted world and setting that always has something to offer at every turn. Everyone knows how the story of Romeo and Juliet is going to end, no surprise there to anyone who read the first stanza, but that does not deter anyone from turning the page again and again. People have an enormous capacity for creating strong emotional links and ties to fictional characters and worlds, given half a chance, and games as an active medium should be able to provide that emotional fulfillment better than any passive medium, yet in general they fall short. Some individual games have reached this status, but to nowhere near the extent the medium's popularity would suggest. The bottom line is, a game should not have to tack on extra bits, such as a point reward system or toolkit to entice players to continue to enjoy their product. Sustaining play and enjoyment should come

from and be designed directly within the game itself. One way of doing this is by cultivating a strong emotional tie. What then should games be doing better to provide an emotional link with their players? Should developers even want to provide it?

Once players have this emotional tie to a specific game IP, they will be more willing to buy sequels and spin-offs of the IP almost immediately without regard to quality or review. One has only to look to the *Halo* franchise for confirmation. The first *Halo* begat a huge following of fans, who eagerly purchased a new console to gain the ability to play the new *Halo 2*. Not only did this have great market rewards for Bungie, but also increased the marketability of the new XBOX 360 immensely. The fan following of the series grew even more, as players became emotionally attached to the world, the narrative, and even Master Chief himself. Once *Halo 3* was ready to hit the shelves, fans were rabid to get the game as fast as possible. People stood in lines outside storefronts in the cold to reserve a spot, they purchased expensive collector's editions of the games containing special items and artwork, and other players replayed both games back to back in order to refresh themselves with the storyline.

However, an interesting thing occurred when the actual game was released. *Halo 3* sold record amounts its opening week (no doubt helped by the fact that it came out both in both the American and European markets at the

same time), but instead of providing an the epic conclusion to the series, it left

fans confused or angered. The game itself lasted only a scant six hours, was

basically a complete rehash of the exact gameplay from *Halo 2,* and was full of

sloppy art and assets. Despite an immediate outcry from the early buyers, the

loyal fanbase still continued to purchase the game, convinced that it couldn't be

that bad, there must be a mistake somewhere. But almost a month after its

record-breaking sale, all mention of the title vanished from magazine stands and

review websites, despite such a heavy buildup to its release.

Having such a strong emotional attachment to the franchise, players

provided a solid, loyal base for Bungie to sell its products to, complete with the

free viral marketing that such a fanbase often provides. This obsession with

Master Chief and Halo not only provided a solid, targetable sales group for the

developer, but also a larger market share for Microsoft and the XBOX. However,

such a widespread and rampant fan addiction also demands some amount of

responsibility from the developer. Even one small fault will be seen as

unforgivably egregious, and entire blocs of the fan base can become immediately

disillusioned. The transition from the original Star Wars films to Episode I still

cries out, loudly.

4. Casual versus Hardcore Games and the Broader Audience

"The odd thing is though that, according to a new study reported by Reuters, although everyone plays casual games men are less likely to admit it than women and are actually a little ashamed of the fact. The study shows that although women tend to buy more of the games, play is actually split equally between gender."[26]

There has come to be a divide in how games and gamers are generally classified. No longer is it purely a matter of genre or console, but now the top classification takes into account just what *kind* of gamer you are – casual or hardcore. To define the two kinds is interesting, since depending on whom you ask, the words could mean vastly different things. To some, it is merely a question of time spent per week playing and number of games purchased; to others, whether you buy consoles or not. Yet others will use knowledge of game trivia as a basis of judgment, and a few will even base it completely on your favorite genre. Regardless, the 'traditional' player base is seen as the hardcore fans, the ones a game *must* market to in order to sell well, whereas casual players are generally seen as fringe players who could never support a title in sales by themselves alone.   The debate gets even more frazzling and hard to follow as specific games are then given casual and hardcore labels, not all of which are universal to each individual editor or reviewer.

A point that does not make any sense to me as a gamer is the insistence of

some editors and developers that the two kinds of gamers are always

diametrically opposed people, will never play well together, and that one side

will invariably 'ruin' the other's experience and perhaps that of all gamedom.

This attitude is based on nothing but fear of change and losing special 'elite'

status. The Nintendo Wii makes an excellent antithesis to the idea that casual

games and gamers ruining the market.[27]

If we look at pure numerical sale values across the three 'next gen'

systems – the Nintendo Wii, Playstation 3, and XBOX 360, the Wii outsells the

other two consoles handily, by millions of units. If we then compare the sales of

each of the console's bestselling games, the Wii again sells more by the millions.[28]

While all Wii games are not casual, nor all PS3 or Xbox 360 software titles

hardcore, the majority of the games sold and marketing do fit the generalization

– as well as the stereotype that gamers themselves assign the consoles. Critics

who claim that the casual market is unsustainable simply do not recognize the

data accessible to them. While it may be true that the casual market may not buy

as many games per person as a hardcore player might, the simple fact of the

matter is that there are simply *many more casual players* in hard numbers than

there are hardcore players. Mass marketing entertainment has been aware of this

since the beginning – appealing to your largest common denominator, not the

niche market, is the best way to turn a profit and guarantee success of a product.

The true measure of success, then, is whether your product can appeal to both

markets at once without alienating one or the other.

The most basic way of doing this is not to focus on the packaging of your

product and getting all the flashy bits in order, but to focus on the basics. All

players want the same basic things from their games — they want to be

entertained and to have solid gameplay at their fingertips, something which is

simple to learn but offers depth and challenges. One such example of a game is

PixelJunk's *Monsters*, available for download from the Playstation 3 Network.

The game itself is simple and harkens back to the old "tower-defense" games,

where the play has to build up defenses and research new ones to combat an

increasing horde of foes. What works so well with *Monsters* is the relative

simplicity of the whole experience — click on tree, build tower — mixed in with

an appropriate degree of challenges for the player. While of course many

hardcore players are downloading the game, since they are the main owners of a

Playstation 3, many casual gamers and non-gamers have been picking up the

controller of a spouse or friend. *Monsters* allows for 2-player co-operation on all

of its missions, and many of these non-hardcore gamers are finding just as

enriching an experience for them. "As for the comment regarding there only

being one way to complete levels, … my wife loves the fire tower — my wife

isn't a gamer but she completed [the game] fully just recently — all rainbows. She wouldn't get off the damn thing every night."[29]

Besides gameplay, the other way to appeal to both casual and hardcore gamers is through the entertainment experience. Aristotle clearly states that to achieve success with an audience, a work of entertainment must evoke catharsis in them, meaning, they must have some sort of emotional response to the work. A look at any best selling movie list will show that these are the movies that evoke something in their audience – hope, pity, sympathy, empathy, etc. It is not the subject matter that makes these movies classics, but rather what they have to teach, what they have to show. Games that do not care about the emotional responses of their players to their material are only short-changing themselves in the long run. A player who does not emotionally connect with a game will only feel apathy towards it, a feeling far more damaging to sales than hatred. In the words of Horace Greeley, "apathy is a sort of living oblivion."[30] Nothing would be worse than to have all of a developer's years of work and toil just pass on unnoticed, because no player could find a reason to connect.

5. Player Immersion

"The best video games attract people in the same way that great novels or movies do, through emotional stories, color theory, and the ebb and flow of action. Unlike novels and movies, these games take immersion one step further by specifically casting you in the leading role."[31]

Immersion is one of the hip buzzwords of recent gaming, being touted as both games' greatest strength and greatest drawback, depending on the party asked. Gamers and developers claim it as the ultimate success of any entertainment medium, while panic-stricken news media and lawyers blame every latest teen crime on it. Regardless of any moral or legal quandaries it may present, immersion is the one area of entertainment where games stand to out-perform all others.

Emily Brown's paper on immersion identifies three main levels of interaction: engagement, engrossment, and full immersion.[32] It is at the point of transition from engagement to engrossment where cultivating active player emotions stands to provide the most benefit and reaction. Most gamers are engaged with their games while playing, but after hours of the same gameplay and narrative, many start to become weary of the game and their engagement begins to fade. These are the players who will often never replay a game or sometimes never even finish one. A few players will remain engaged with their

selected game and move onto a stage where they are no long just enjoying the game, but become fixated and almost obsessed with it. These are the players who will spend weeks at a time finishing each and every side quest, collecting all the optional goodies and playing through the entire game more than once. The question is, why do some gamers make it all the way to engrossment, while others begin to fade out during only the first level of engagement?

Some of the answer is obviously physiological or practical management of time, as not everyone has the same attention span or amount of free time to devote to the game. But if we are to speak in loose generalities, there should be something the inherent design of the game could do better to keep players engaged in their game world for longer periods of time. To some this now might seem to be verging on manipulation or a mild form of 'brain-washing', but this is exactly what the film industry has been doing for the past century, and authors for centuries more. Writers want to shape a complete experience for their audience, taking their listeners from highs to lows and back again. To better feel and empathize with a character's sudden, devastating loss, writers will typically try and make their readers feel joy or experience a brief genuine bit of comedy a moment before dropping the proverbial shoe. The juxtaposition of the two diametrically opposed emotions makes each more real and potent, and it is no accident that one follows the other in close succession. This shaping of the

reader's emotional experience is not backhanded manipulation, but rather an attempt to bridge the gap between fiction and reality and increase immersion by increasing empathy.

Games, as an active medium, should work even more persuasively upon their audiences, having multiple sensory avenues open to them. It is here, in immersion, where awareness of emotions and how to best use them for the player's enjoyment can greatly enrich a game experience.

Some Methods of Creation of Emotion in Games

The Six Primal Emotions and their Universal Parts

"Every instinct that is found in any man is in all men. The strength of the emotion may not be so overpowering, the barriers against possession not so insurmountable, the urge to accomplish the desire less keen. With some, inhibitions and urges may be neutralized by other tendencies. But with every being the primal emotions are there. All men have an emotion to kill; when they strongly dislike some one they involuntarily wish he was dead. I have never killed any one, but I have read some obituary notices with great satisfaction."[33]

The six primal emotions, as readily identifiable by expression and semantic label, are fear, anger, disgust, surprise, joy and sadness. These are emotions which have been found in all cultures across the globe and are still comparable and understandable to others outside of a specific culture. Besides these six primals, Anna Wierzbicka, a Professor of Linguistics at the Australian National University, has identified other 'emotional universals' in her work on languages - some of which are useful for a study of emotions in games. She proposes ten working hypotheses garnered from her work in cross-cultural studies:

1. All languages have a word for Feel
2. In all languages, some feelings can be described as "good" and some as "bad" (while some may be viewed as neither "good" nor "bad").
   All languages have words comparable, though not necessarily identical in meaning, with *cry* and *smile*; that is words referring to bodily expression of good and bad feelings.
4. In all cultures people appear to link some facial gestures with either good or bad feelings, and in particular, they link the raised corners of the mouth with good feelings(cf. Ginsburg 1997) whereas turned down corners of the mouth or a wrinkled nose appear to be linked with bad feelings.
5. All languages have "emotive" interjections (i.e. interjections expressing cognitively based feelings).
6. All languages have some "emotion terms" (i.e. terms designating some cognitively based feelings).
7. All languages have words linking feelings with (i) the thought that "something bad can happen to me", (ii) the thought that "I want to do something", and (iii) the thought that "people can think something bad about me", that is words overlapping (though not identical) in meaning with the English words *afraid, angry*, and *ashamed*.
8. In all languages, people can describe cognitively based feelings via observable bodily "symptoms" (that is, via some bodily events regarded as characteristic of these feelings).
9. In all languages, cognitively based feelings can be described with reference to bodily sensations.
9. In all languages, cognitively based feelings an be described via figurative "bodily images".
10. In all languages, there are alternative grammatical constructions for describing (and interpreting) cognitively based feelings.

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While these are based purely on linguistic faculties of emotion, they do

raise some interesting points for the creation of emotions in general.   First,

Wierzbicka corroborates with Ekman's findings of linking facial displays to emotional readings. She also describes other methods of using bodily functions to describe emotional awareness, such as using figurative images and events triggered by the emotions in question. However, the problem with the second statement is that while all languages and cultures share the concepts of using the body to display emotions (not including the facial expressions), there exists no hard evidence that all cultures share these same bodily functions. For example, while one culture may identify trembling and shaking of the shoulders as a sign of fear, another culture may identify such a display as a sign of intense anger.

Herein lies one of the major problems with body animation in games to give the player emotional cues. Animation itself is not perfect or completely natural, and cues from the actual movement may be hard to read or contradictory with other contextual signs such as facial expressions or situational circumstances. Even facial expressions can be misleading if the context provided the player is lacking or does not make complete sense. If, however, games instead focus on the formal objects of the emotions - the context, instead of the end result of the emotion, the animation, - clarity can be reached faster and more efficiently.

A look at Capcom's *Okami* reveals a similar case (Fig 8). The game follows the story of Amaterasu, the Japanese goddess of the Sun, who is

represented as a white wolf whom the player controls.   The game is graphically

stylized to look like old Japanese watercolor paintings, and all audio dialogue is

streamed using unintelligible syllabic noises, very much like the adult characters

in Charlie Brown. Despite this and the wolf's naturally inhuman face, *Okami* still

manages to create an emotional link with the player. While the wolf's face

affords a few visual cues, it is mostly through the contextual setting and well

developed formal objects that the game succeeds.

If we take a more abstract view of how formal objects can relate to the six

primal emotions, it should be possible then to extrapolate mechanics and cues

that would succeed with a global audience.

Taking a cue from Wierzbicka's classification system, anger can basically

be thought of as "a bad thing has happened and I don't want it to happen again,

taking action to see it so".   Anger is often associated with something perceived

as unfair happening that was often unforeseen, and results in either a wish to

revenge, harm, fix, or otherwise acknowledge the problem with some sort of

action. The stronger the tie to the unfair happening, such as if it were a cared-for

person or thing, the stronger the emotion created. The problem with anger in

games is the concept of caring. Some players very well may become emotionally

attached to characters and things — see Aeris's death scene from previous

sections — but acknowledging that the game is not reality dampens some of the

affect. Mild anger or more often, annoyance, are more often seen as responses to games: full-out rage is a rare thing, even in life. While annoyance or anger is often displayed by players failing to understand a puzzle or being thwarted by difficult gameplay maneuvers, this obviously is not the formal object which designers are shooting for.

Anger can be a powerful catalyst in terms of narrative and player motivation. Using *Final Fantasy VII* as an example, a player who is truly angry at the death of Aeris will feel that the villain, Sephiroth, personally slighted *them*, and did not just wipe away a few meaningless pixels from the screen. While the game might require the player to follow after Sephiroth in a linear fashion, the player would have already made the conscious decision that he had to 'get him back', thereby creating a sense of choice for the player. It does not matter at all that the actual choice was nonexistent or different than what appeared (the player could of course always choose to turn the game *off*), but the perceived choice made by the player is where the importance lies, and what will keep a player moving through a game.

Fear is similar to anger in that it involves "something bad" happening, but it is instead formulated from the belief that something bad *will* happen, and has not already. Fear then promotes action, but instead of facing the 'bad', fear encourages a person to remove himself from the fearful object or person instead

of confronting it, as with anger. Fear also requires a great deal of care from the person involved – apathy for anything affected by the formal object will not create fear, just differing levels of indifference. Besides caring, fear can only be created if the player *knows* enough in advance to be afraid. If nothing has happened in the game so far to tell them that walking into meat closets results in instant death, they will have no basis for having fear in the first place. Some 'fearful' situations can be extrapolated from reality, but then the problem arises that not everyone has had the same conditioning to what is fearful. It is much more efficient to create the impetus for fear within the game itself instead of relying on what a player may or may not intrinsically know.

While many people experience fear when watching a movie, the number is fewer with people playing games. I propose three hypotheses for this. One, games, due to their aesthetics, are automatically less 'believable' a medium than a live action film, and could then be found lacking in suspension of disbelief. The poor acting skills evidenced by many characters would also support this. With a smaller sense of belief, a smaller sense of care is developed, leading to players being not really concerned about the zombie around the corner. It's not real anyway. A second reason continues this zombie example. Say a player does go around the corner and, underestimating the power of the zombie, gets his brains eaten. No big deal, the player just pushes the reset button or reloads a

saved file from earlier. Nothing lost and information gained, making it a strategic advantage for the player to be killed and not fear his death. Too many save points, or allowing the player to save whenever they like, destroys any attempt at creating fear. Nothing can be feared that cannot be lost. The third reason is control. In a passive medium, the audience member has no control over the character or plot of the movie, effectively being forced to confront situations or things that may inspire fear. The flight response from fear being repressed only makes the emotion stronger, resulting in the common sight in horror movies of audience members shielding their face with their hands. In a game however, the player has a choice to make, theoretically, at every turn. If they feel fearful of something in the game, they are not necessarily forced to confront it and can run away, relieving that fear. Some may turn off the game completely and wait for a different time of day or for a friend to come over before continuing. Sustaining fear is going to be problematic for any active medium where the player is given multiple paths or free rein.

Sadness also involves "something bad" occurring, but revolves around the idea of loss or removal, whether it involves something physical, mental, social, permanent or temporary. The more permanent the perceived or actual loss, the stronger the emotion is going to be felt. Sadness can often be followed by anger, when a desire to act upon the source of sadness occurs. However, the emotion

itself does not beget any sort of retaliatory action on its own, and is instead often

expressed in a lack of response or action.   One action that sadness can create is

the removal by the subject of anything that remotely reminds them of the

original sadness. For example, a pet owner who loses a family dog in a violent

accident may not get another dog right afterwards or ever again, and instead

either gravitate towards other animals or no pets at all. A dog would only

constantly remind him of his previous loss and what has been permanently

removed from his grasp.

This emotion is much easier to achieve in a game setting than the other

two, since the fact of the game world being nonreal does not directly affect the

development of the emotion. While a player goes through a game, he will

invariably lay claim to something or someone as it goes along, whether it be a

character, item, or place, — usually it is something either the player has strongly

worked for over the course of time or something that he personally customized

or created. While the item in question may not be real in a tangible sense, it is

still *his* in a very real sense of ownership. The key to sadness is insuring that a

sense of ownership or connection exists between the player and the object and

then forcefully removing the object, preferably permanently for a stronger effect.

Even saved game files themselves can be a formal object for sadness.

Many players speak with grief over the accidental deletion or loss of a saved

game. Instead of replaying the game up to the point and trying to retrieve what they've done, depending on the magnitude of the loss and the way in which it was removed, some players will not even attempt this and never pick up the game again. I personally met a handful of MMO players who accidentally deleted/sold a favorite weapon or armor and had to make a complete new character from scratch to continue playing the game. The old character reminded them too much of their loss.

Joy usually occurs when "something good" occurs for either oneself or for one who is cared for. Like sadness, joy's formal object can be expressed by either a physical or mental object, only limited by the perceptions of the subject in mind. Greater joy is usually expressed if there is some amount of pre-knowledge or pre-cognition about the eventual outcome.

Joy is often achieved at the successful attainment of a goal or completion of a plan.   The overall size of the goal or plan is inconsequential to the creation of the emotion but *does* directly affect the length of the felt emotion. Goals that took longer to achieve or required more work often produce joy for longer periods of time without the need to reinitiate the emotion. Smaller completed goals will need to be constantly completed in order to rival the emotion created by one larger, completed quest.

Joy and happiness are some of the easiest emotions to create in a game, as most, if not all, games are about setting and achieving goals and victories, whether they are set by the player or the system. The key to keeping the creation of joy moving over an extended period of time is to vary the methods of success so there is always the feeling of accomplishment. If at any point the play become rote and methodical, the player will have lost the feeling of actually achieving something, and the chance for joy is also lost. As with the other emotions, the key to this is the *perception* of continual and new achievement, whether or not the methods and routes to success actually change all that much. If the player feels that there is increased difficulty to match his new skills, he will continue to play far longer than if the game did not continue to challenge him.

Disgust is a much more difficult emotion to abstract with a general discussion of available formal objects. While it has been proven that the emotion of disgust is evidenced by all cultures in the world, and is therefore universal in nature, it is less evident whether the formal objects are universal as well. Disgust can be basically labeled as the emotional implication of extreme physical dislike, or as Gary Faigin eloquently described it, "the feeling of wanting to throw up".[35] Many of disgust's formal objects will be based purely in specific cultural contexts – what may be socially acceptable in one country may be considered the foulest insult in another. However, one formal object which can be considered in a

general sense that can be capable of evoking disgust is the perception of extreme unfairness. The unfairness in question does not have to follow a specific form, but that which creates unfairness in moral judgments or social rights can often create large instances of the emotion.

As far as games are concerned, disgust is one emotion that would have to be handled carefully. Unfortunately, the easiest and more universal method of creating the emotion is also the one designers will most often want to avoid at all costs – disgust evoked through unfairness of rules in play. Nothing creates disgust faster in a player than for him to feel unfairly slighted against by the system, whether digital or not. For example, video games with a cheap and unfairly balanced boss character often create disgust in players when they discover they are nearly impossible to beat with the average player's skill set. This kind of disgust only hinders the game, in that many of these players will not feel like it is an acceptable challenge, and just stop playing the game instead of treating it as a goal to overcome. One such game as this was Level 5's *Dark Cloud*, an ingenious title combining city building, adventure, and role-playing game mechanics. However, many players were ultimately stumped and disgusted with the final boss fight of the game, finding the challenge completely out of line with the complexity of the game up to that point. After attempting it a few times, these players simply walked away with a sour taste in their mouth.

What could have been a satisfying conclusion to forty-plus hours of enjoyable experiences became a disgust-filled disaster of an end.

Handled correctly, however, disgust can be very powerful motivating force to move players to care about a game or a specific episode or part in a game. A game could craft a narrative that creates a feeling of disgust in the player on a moral level, one that would drive him forward through the game to right the wrongs he perceives. It can also make the final achievement of success only that much stronger.

Surprise, the last of the primal emotions, is also the most different from the previous five. While all the others required some amount of pre-knowledge about a situation or possible outcome, surprise is the only one that usually cannot be effectively evoked with any sort of for-knowledge present. An emotion of surprise is generally induced by the onset of a situation which was not planned for or foreseen, whether the situation is 'good' or 'bad' has no bearing on the actual emotion. Surprise is also unique in that it can be considered a sort of 'linking' emotion, in that it is almost always followed by one of the other five emotions in quick succession, making it an easy platform to build the elicitation of other emotions from.

Surprise is often linked with two different ideas, one of spectacle and one of discovery. Only the latter, however, should be considered as a viable and

creditable means of creating the emotion in a game format. As Aristotle often

mentions in "De Poetica", surprise based on the creation of spectacle is a weak

form of the emotion, and is only capable of creating the emotion *once* per

audience member. The first time a person sees the monster of the film leap out

onto the screen, she may be surprised and frightened by the unexpected event.

However, on every subsequent viewing of the film, the viewer will know the

timing and placement of all such phenomenon, destroying the one method of

creating the surprise and fear the movie relied on. This kind of event Aristotle

classified as 'spectacle', pieces placed only to create an 'ooo' or 'aah' out of the

audience member on the first view, and lacks any deeper meaning on content.

Unfortunately for games, this method of creating surprise is rampant and can be

directly credited with many reasons why players do not replay certain titles.

There are no more instances to be surprised, nor instances to learn something

new. Knowing the exact placement of every soldier and every item on Level 4

leaves no room for surprise, and the game becomes monotonous in its

playability.

Game-save mechanics are also at fault for destroying the viability of

surprise. Games that do not utilize any random or procedural content and allow

the player to save and reload freely too often destroy the creation of suspense

and surprise. Enemy zombie around the corner pops out, surprises you, and eats

your brains? No problem. Reload from the save you created 1 minute ago.

While designers may think that players would not use such tactics as this to

actively destroy their play experience, there is one thing they may be forgetting –

players are oftentimes lazy. By this, I mean if you give them an option to save

whenever they want, the average player will abuse this ability and save far more

often than strictly necessary, and reload these files after small errors that are

basically inconsequential. It is no surprise then, when a game such as this is

either labeled unbalanced by critics or becomes boring and is dropped off at the

nearest resale store.

Surprise can be a highly effective and motivating emotion, however, when

it is used in the aid of *discovery*. Discovery in a game can take on many forms,

from exploration of new areas and lands, meeting new characters, learning new

rules and play styles, finding or creating new content, almost anything which

could be new to the player can be a means of discovery and creating variable

levels of surprise. This is one reason why games that utilize well-placed

randomized content, have multiple variable outcomes for player actions, or have

multiple player inputs are so popular. The means of continual discovery are

built into the core of the game, leading to virtually unending methods of crafting

surprise, which in turn creates other emotion experiences.

Having generalized the formal objects of the six primal emotions thus far, it is natural now to discuss various specific areas in the design of games that can be looked at in more detail in how they effect the creation of emotion. I have identified ten key areas where the primal emotions can be evoked to create a more engaging play experience, but this list is by no means exclusive and rather serves as a platform from which to build emotional experiences.

1. Plot or Narrative

"A narrative is like a room on whose walls a number of false doors have been painted; while within the narrative, we have many apparent choices of exit, but when the author leads us to one particular door, we know it is the right one because it opens."[36]

One of the more obvious means of creating emotion in a form of visual media is with a well-constructed narrative element. Human beings thrive on the retelling of stories as is evidenced across time - from oral histories and poetics to novels to more modern films and movies. Although by no means required for the creation of a successful game, narrative elements can be greatly beneficial and enriching to a play experience. By narrative I do not mean dialogue episodes or cutscenes, both of which are related to narrative but are their own separate categories with their own concerns. It is possible to have engrossing

narratives without the use of dialogue at all, and as discussed later, for games in particular it might more beneficial than not. Games such as *Passage*, designed and created by Jason Rohrer, tell moving, engaging stories without the use of dialogue, cutscenes, or fancy animations of any kind. (Fig 10) The game tells the life story of a man, the player, as he travels from young adulthood through his life until his eventual death. *Passage* takes no more than five minutes to play, has no dialogue, extraneous animations, or hardly any visual content to speak of, and the player's only action in the game is to walk forward through time. And yet something this simple is not only engaging in its narrative, it is also effective in creating a deep level of empathy with its player. Many players find themselves deeply saddened at the death of their tiny pixel wife and their own eventual death, and play the game many times through to see if the ending is ever different. If the game were lacking these narrative aspects, it would become a simple and rather dull side-scroller maze, devoid of anything new or engaging and certainly no where near as enjoyable. While the narrative is not crucial to the development and implementation of game mechanics, it can make a game more meaningful and enjoyable for its players when they feel there is a greater purpose to their actions.

The key to creating a driving and meaningful narrative that is as universally appealing and effective as possible is to keep to well-known

archetypes that appear in more than one culture around the globe. Joseph

Campbell beautifully describes in his book *The Hero with a Thousand Faces* the

idea of story archetypes and develops the idea of the "Monomyth", a story that

has been retold across all cultures. It is here in these possible retellings of the

Monomyth that games have a chance to emotionally inspire and empower their

players unlike any other medium. Only in games, an active form of

entertainment media, is the audience member cast in a role in the narrative and

has a feeling that she can actually make a difference or have a say in the

development of the narrative. It actually does not matter as much that this is

mostly a falsehood adopted by the player upon picking up the controller – games

are generally not nonlinear nor do they adapt to the player's every want, and nor

should they necessarily have to. The only thing that matters in the successful

creation of a game narrative versus a passive narrative is that the players have

the *perception* that they are making a difference, developed through meaningful

choice, and not necessarily the ability to change anything about the direction of

the game. The powerful part of these archetypal stories and story parts as put

forward by Campbell is that there is already an innate connection with the flow

of the narrative and characters. The hero's actions are easy to understand and

empathize with for they are often our own approaches to problems and obstacles

in our own lives. It is easy to create an empathetically emotional response from a

player who understands the characters and narrative, rather than trying for the same response from a new approach which in the end may not have a logical or believable flow. Narratives create empathy between an apartheid system and a player, and can sometimes form the only difference for when the press of a button either means nothing or is instead the catalyst or introduction of a formal object to an emotional response.

That being said, narrative is of course not necessary, nor should be necessary, for every game. While many players do enjoy a reason and in-game motivating force for their actions, it is not necessary for the game to still be emotionally impacting on the player. A game that is capable of creating emotional responses from their player purely by gameplay and control mechanics, such as *Guitar Hero*, has no need for a narrative to be built into the system. It is here achieving the goal of emotional response and catharsis in a very pure form, and the heavy inclusion of aspects such as narrative may actually mar the emotional connection already established.

Narrative is also sometimes equated with an individual's play experience of a game, although the two are not the same. Narratives by definition have a beginning and end, and flow from defined points with meaning. Experiences as assembled by the player will most certainly have flow and meaning for that specific player, but it is not a universal phenomenon nor can be transferred from

one person to another as in the retelling of a story. What choice may have had meaning for a player in an experience does not necessarily hold such meaning for another. Player play-experiences can be powerful tools in the understanding and crafting of game narrative, but the two are not universally substitutable.

There have been many books recently written on the crafting of game narratives, but many seem to miss the point entirely that the difference between active and passive medium narratives is not actual choice but rather the perception of choice. If a player were to have total freedom of choice you would no longer be providing the player with a narrative by your very system design. Narratives flow from a beginning to an end with meaningful connections, free choice does not. One of the best methods of writing game narratives is to start by writing *narratives*, studying the classics such as Campbell and Aristotle, and then begin introducing meaningful choice after the basics are there. The reason why many game narratives fail to engage their players or work on any level at all is that they are at heart not narratives, but loosely strung, unconnected plot pots under the masquerade of story. If there is no logical flow between ideas, created by meaningful choice, then there is no narrative, only bullet points. Giving your players choice is one thing, giving them meaningful choice, or the perception of, is another.

2. Characters

A quick look to the internet or any fan-run gaming convention will reveal

the near obsession some gamers have with their game characters, and the

emotional bonds they forge with them are no less real than the ones they forge

with their friends dressed-up next to them. (Fig 11). As the figure of a typical

cosplayer (costumed as a character) group shows, gender does not even play into

the emotional bonds players form with characters, girls are just as likely as boys

to dress up and adopt the persona of Sephiroth. And that is the interesting thing

about cosplayers at these conventions: it is not just that people adopt a costume

based on, typically, every minute detail, it is that they also adopt the personality

of the character for that time, down to specific quotations, mannerisms, and

bodily gestures. It is here in video games that the portal between the main

character and the audience member is truly realized.

In any form of entertainment medium, the main character is the lens and

filter through which a narrative or setting is explored. The character itself

becomes the formal object for the audience member by the use of empathy – they

laugh, we laugh, they cry, we cry. The character's responses effectively fills in

the gaps of knowledge an audience member or player might be missing about a

situation arising in the world. While a player might not have all the information about a new world and all its idiosyncrasies, if a character starts acting agitated or fearful about a given situation, he's basically feeding the player the necessary experience to relate to the situation as well. The character might be agitated about walking into a cave, and because he is upset about it, the player now knows that caves are not necessarily great places to be. Using characters in this way to subtly fill in experience gaps can make the play experience for many people more equalized and universal regardless of actual life experience.

The character's responses however must be believable and not sound or look too contrived – otherwise this has the effect of breaking all suspension of disbelief and can result in either anger or amusement at the game itself, and not the intended response. It is a problem described by Aristotle and Campbell both of heroes and main characters – the flow of events and responses must follow a logical path. Most people would not just immediately jump up and altruistically offer any and all help available, most need to be convinced that it should be important to them and that they can actually make a difference. Likewise should players and their characters not be forced to immediately take upon quests or missions, it will feel too much like a loss of free will and choice. But here, unlike in any other entertainment medium, can players ostensibly feel the strongest emotional responses to a situation - once again because it is a passive medium

versus an actual one. The personal experience of a situation is no longer "they

saw, it happened to them" but now "*I* saw, it happened to *me*". Being able to

effectively cast each player as a leading role allows a level of connection deeper

than any passive medium can offer. Having the player now taking actions and

making decisions in the world brings him closer to the other NPCs in the game,

creating a stronger bond of empathy between them.

    Third-person perspective characters work best for the successful creation

of empathy, since humans rely both on the tonal quality and visual aspects of

language and communication to relay ideas and feelings. Both the main

characters or NPCs can relay experience information and become formal objects

for the player, and the interactions between the two can be powerful forces,

much like an emotionally charged scene between two talented actors. There may

not be any setting, hardly any lights, or props to speak of, but two talented actors

can convince an entire audience through empathy that they are all in the middle

of a wartorn town and have them weeping in moments. It is here in this innate

ability to empathize with other humans while lacking similar experiences that

effective emotional responses can be cultivated. A scene can be filled with the

greatest and most careful detail, but if a player lacks the personal experiences to

understand it, no amount of extra detail can change that – only by gaining more

personal experience or learning through empathy can that be achieved.

First-person perspective main characters fulfill a different role for the

player – instead of creating a filter for the player's experience and create emotion

through empathy they try and place the player himself into the setting. NPCs

can still relay emotional cues, but it is up to the player ultimately now to garner

experiences in the game to create his own formal objects. While this has the

ability to create more powerful responses in a player by making it personally

rather than empathetically driven, it can also create some problems or cautions

unique to the first-person character. While it is more palpable on a subconscious

level to have third-person characters react in ways we adversely wanted - they

are after all different people - the first-person character who suddenly develops a

personality during a scene can create a truly jarring experience. The players are

told through gameplay and interface that *they* are the main character of the game,

and that it is their own personality and force driving the game forward.

However, when in some plot-driven scenes this character gets its own voice and

opinions, that link between player and game is destroyed. The game has now

effectively conveyed two contradictory statements to the player: you, your

emotions, your personality, are the main character except in this other

circumstance when someone else is going to take over and make those decisions

for you. While the gameplay itself might very well still be enjoyable, after

episodes like this the emotional link between the player and the game has been confused and will have to be rebuilt again through play.

Player-created characters offer a different form of emotional attachment that will be discussed in player-created content and ownership. It is with these, however, that it is even more important not to take away personality or choice from the player like with a first-person character. Atari's *Neverwinter Nights 2* does this particularly well. The game is a digital rendition of The Forgotten Realms setting of *Dungeon and Dragons* and makes players create their own character as the main character. Although the player is placed into a pre-designed campaign, important dialogue and decisions are always accompanied with at least three choices for the player to make and the NPCs react accordingly. (Fig. 12) The player is also not allowed to just keep clicking through the tree to see all the options – some will disappear and new ones take their place based on previous choices. While this therefore lacks flashy cutscenes or voice-overs for data restraint requirements, it instead keeps the integrity of the player character intact and the emotional impact high, as the player still feels like it is him talking, him making the decisions. While it does make the player read more text instead of listening to dialogue, unacceptable to some, it keeps the player actively involved in choice and makes him feel like his choices are meaningful, even if the actual end response may not be different (known as *false branching*). This kind of

interaction can create deep emotional bonds between a player, a character, and the game, and should not be cast aside for the pure reason of the inclusion of flashy graphics, cutscenes or voiceovers. Spectacle should never be placed higher than choice.

3. Music, Sound, and Voice

"Music is the emotion of the experience."[38]
"The composer does not sit around and wait for an inspiration to walk up and introduce itself...Making music is actually little else than a matter of invention aided and abetted by emotion. In composing we combine what we know of music with what we feel."[39]

Humans are both visual and auditory creatures, and while millions of dollars are spent on developing the visual aspect of emotional cues, the auditory ones are often short-changed and underdeveloped, to the detriment of all possible formal objects for the player. Audio can be broken down into three different areas for the creation of emotional cues: soundtrack, sound effects, and voice-overs, all of which are capable of producing an emotional response either when used concurrently or singly.

The soundtrack is the first form of audio that most people think of when asked about a game, and often the one with the most lasting effects, as individual

sales of soundtrack discs can attest to. Music has been a powerful emotional tool

for hundreds if not thousands of years, whether vocal or instrumental in nature.

Early Gregorian monks chanted nonstop during ceremonies and rituals, helping

their listeners feel closer to God and enlightenment. Classical composers like

Beethoven were capable of rousing entire crowds just by the power of a chord

progression. One romantic composer, Gabriel Fauré, would take poetry which he

felt in which the words could not accurately convey the emotion, and rewrote the

poem as music, expressing the essence of the emotion through melody. Anyone

having attended a live symphony or concert can attest to the power of music, and

yet it is only recently that the audio scores of games have been getting attention

and holding prominent areas in the game development process. Nobuo

Uematsu and Jeremy Soule, two game composers, have been routinely cited by

fans and gamers as having actively enhanced their experiences with the games.

The soundtrack is one of the easiest ways to either cue a player to feel a

certain emotion or to forever annoy the player to the extent they turn off all

audio. Many games such as *Neverwinter Nights*, *Guild Wars*, and *Fable* use

combinations of themes and songs dependant upon a player's actions, giving live

feedback and enhancing the experience. When players enter battle, the music

changes accordingly, picking up in tempo and velocity, and introducing more

drums and brass instruments, things traditionally and innately associated with

adrenaline and conquest. Calm areas are accompanied by simple, sweet

melodies, or sometimes no music at all. As compared to other forms of media

however, games have the extra problem of extending tens to hundreds of hours

in length, and nothing can jar an experience more than having a short annoying

theme loop for hours on end.

Sound effects are another very effective and relatively inexpensive

method of evoking emotion in players. Most games pay careful attention to

effects such as foot prints, gun shots, and ricochets, but it is in the careful

selection and placement of environmental sound effects where players can find

rich formal objects for emotion. For example, if a player is placed into a dark

cave devoid of sound, some may feel apprehension, while others may feel

peaceful. But a simple inclusion of an echoing wind, an occasional bat squeak

and shuffling rocks and debris make an ambivalent space instantly recognizable

as creepy. Add in an echoed terrified scream and the player instantly knows that

there are harmful things ahead to look out for. Likewise a crowded street can

take on many different forms purely based on the tone of the mutterings and

sounds being produced, allowing for the same graphics or models to be easily

reused for different emotional impacts based purely on a quick audio change.

Environmental sound effects have the added benefit of being more universally

understandable by people of different nationalities since basic nature sounds are

not culture dependent, nor are there usually any spoken words that would have to be rerecorded.

Voice-overs and recorded dialogue are the last areas where sound can make an emotional impact, and while it has the ability to be the most effective, it is also the most costly in terms of time and localization, and has the most room for erroneous effect. As any professional actor knows, a good actor can save bad lines, but not amount of good writing can save a piece performed by a lackluster or untalented individual. What once could have been a heart-wrenching and moving scene becomes tawdry or even laughable when poorly read. Voice-overs also have the added problem of having to be retranslated and rerecorded with localization, making it much more expensive than regular printed dialogue. However, a talented voice-actor can bring life and meaning to a scene or line that otherwise might have been a little flat in other regards. Even from a young age children learn to pick up minute differences in pitch and length of syllables in spoken language, and process this information subconsciously with the actual content of the spoken line. As powerful as this is, however, by its very nature of being spoken language, voice-overs are not universal in their basic form of dialogue. Some games use voice-actors during battle scenes and the like for cries or hollers, or other emotive interjections as described by Wierzbicka. These are more universally understandable as they are not actual words but emotive

sounds, and often times many games are ported over with these kinds of sounds left intact.

4. Lighting and Color

"[It] is that rare impressionist painting where people don't judge the light, but rather are judged by it."[40]

Strategic use of color and lighting effects are two other areas where emotional formal objects can be built. Colors have traditionally been used to symbolically represent certain emotions and feelings and to drive an immediate wanted response to a given object. It is by no accident that the leaders of color-coded hero teams are either red-headed or wearing various shades of red in their clothing. This particular color is often associated with strength, aggression, passion, and dominance. A person seeing a character dressed in red innately makes the connection that this character is in charge or powerful (Fig 13).

A recent study by Naz Kaya and Helen Epps rated specific colors to emotional responses of ninety-eight college students using the Munsell Color System. While they recorded individual emotional responses for specific colors, such as angry and powerful for red hues, they also broke down the colors into primaries, intermediates, and monochrome categories, matching these up with more generic descriptions of positive and negative emotions.[41] Their findings are

useful for continued study in using colors to convey universal emotions and have some functional uses for games as well. Green was generally seen as peaceful and calm, grey as boring or depressing, yellow or red as happy, and purple and blue as sad. Yellow-green had the particular and unique quality as the only color being seen as evoking disgust across all participants, the color apparently being associated with vomit and sickness. A full table of emotions, frequencies, and percentages are recorded in their paper.

Using such studies as these it should be possible to better color both characters and environments, not only so they look 'cool' to a player, but also convey extra meanings and emotions for particular settings or points. While it is not always economical to change the actual coloring of an object in the game itself, dynamic lighting can add contextual and immediate changes based on any scene. Besides doing the obvious of making a scene more orange during sunset, or lowering the lights in a darkened corridor, subtle lighting can drastically affect the feel an environment has for a player, from apprehension to joy to sorrow to calmness. One game that did this particularly well in places was Bethesda's *The Elder Scrolls: Oblivion.* The first time a player walks near an Oblivion Gate, even if he does not yet realize what it is or that he is even near something important, the entire sky changes to a foreboding mix of blacks and reds, and the lighting for the entire area becomes saturated with reds and oranges. (Fig 14) The first

time it occurs it is effective in producing a creepy or fearful response in the

player, who is often completely unaware of why the entire world began to look

foreboding.   Changing the lighting in this way is an inexpensive and easy way

of conveying a particular emotional cue to a player.

5. Staging and Interaction on the Screen and Set

"There is an idea, the basis of an internal structure, expanded and split into different shapes or groups of sound constantly changing in shape, direction, and speed, attracted and repulsed by various forces. The form of the work is a consequence of this interaction."[42]

Something that is integral to live performance and recorded films is often

sadly overlooked in the realm of video games – the exact placement of characters

and objects on the set and screen. Granted, some aspects such as building

placement for level design or button locations for interfaces are grilled over in

minute detail, but others, like the placement of characters on a screen, often seem

to be haphazardly thrown around or quickly dropped in place. (Fig 15) This

figure, both pictures having been taken from different expansions of *Guild Wars*,

illustrates the point of NPC placement for effect. The top figure is taken from a

late-game outpost from the first campaign, showing all the NPCs standing in a

straight line, looking forward, inanimate. The bottom picture is taken from an

outpost in a similar place in the campaign timeline from the last expansion,

depicting the NPCs standing in different sized groups talking, laughing, and

interacting with each other. The bottom one obviously gives the feeling of

contentment, ease, calm, and general happiness and enjoyment to a player

watching the NPC antics of break-dancing and laughing. As the outpost itself is

in a backwoods part of the map and not integral to the overall plot of the game, it

lets the player know instantly that it is not place where he needs to be concerned

about anything. However, the top figure, besides being boring to look at, gives

no emotional cues to the player about the importance or weight of the mission

present in the outpost. The player is given no formal object off of which to base

an emotional response, to the detriment of the mission. A sense of foreboding or

fear would be appropriate for this scene, as it is one of the harder missions in the

campaign – Thunderhead Keep - but to the player's immediate perspective it is

no different than any of the previous ones.

Placement of NPCs, PCs, and important objects can not only be formal

objects in themselves, but can also serve to strengthen other formal objects for

emotional responses, such as character dialogue or animation. During important

discussions or decisions in the point in a narrative, it is common to see characters

being placed together in a room to talk together either in real time or during a

cutscene. It is also equally common to see these characters just placed in a

perfect circle staring at each other, equally spaced apart. Besides not sending the

player any physical cues to read group or personal emotions off of about the

current situation being discussed, it serves to strengthen the perception that

these NPCs are not real people, and have no feelings for each other or for the

matter at hand. Real people, if they are friends, would group more closely

together and often touch, either with a hand on a shoulder or by standing close -

hip to hip. While yes, they are pixels and bytes, part of a game's strength is

suspension of disbelief, which is immediately broken upon viewing scenes such

as these. The player can lose any amount of caring he has built up for the

situation at hand, thereby lessening his chances of having an emotional response.

If the NPCs do not look to care for each other, the player does not have a lot of

incentive to either.

Even the asymmetrical versus symmetrical placement of inanimate objects

can be in itself a formal object for the player. Disorderly, nonsensical

arrangements of items can easier lead to a feeling of fear, surprise, or anger,

while symmetrical, pleasing shapes and layouts can easily lead to calmness, joy,

and contentment. As another example, some theories of Feng Shui might seem a

little dated or superstitious to an everyday person, but there is obviously

something about the placement of objects in a space that can directly affect a

person's emotional response to that space, whether towards calmness and relaxation or towards trepidation and unease.

6. Symbolic Objects and References

"… bring out new meaning, new forms, and disclose a reality that was literally not present before, a reality that is not merely subjective but has a second pole which is outside ourselves. This is the progressive side of symbol and myth. This aspect points ahead. It is integrative. It is a progressive revealing of structure in our relation to nature and our own existence, as the French philosopher Paul Ricoeur so well states. It is a road to universals beyond discrete personal experience."[43]

Symbols and symbolic references can be very powerful emotional objects for people, within or outside of a game space. However, the main drawback with symbols is that they are almost always culturally referenced and experienced, making them not primarily suitable for universal formal objects. Often, particularly powerful symbols can have polar opposite meanings based on the individual, even if they are from the same culture and society. A pentagram to one might be a symbol of power and balance, while to another it might represent ultimate evil. One individual symbol might have layers upon layers of meaning, but only the person with the right combination of knowledge and experience can grasp the fullest meaning from it.

The safest way to use a universally recognizable symbol is to create a

specific in-game symbol and build the meaning up from there. While this will

not be as strong as an ingrained symbol from childhood, it will have the benefit

of being universal to all players. One such game that attempted this method of

creating an important in-game symbol was Square's *Final Fantasy X*, which

created a unique symbol to represent the main deity of the religion of the world.

(Fig 16) From the very first hours of the game, the player is introduced to Yevon

as a powerful and benevolent God, equating his symbol with good and the

willingness to help others. However, over the course of the game, the true

nature of Yevon is revealed and the symbol begins to take on multiple levels of

meaning, leaving many players with a new feeling of disgust or anger when

viewing the symbol. As the designers created an entirely new symbol for Yevon

and did not copy it from any other recognizable religious motif, they had

complete control over all emotional feedback the symbol was capable of

producing and thereby guaranteeing their player responses.

Besides crafting a new symbol for a specific purpose, there is another kind

of symbol that can be useful in a game world to illicit emotion from a player – the

symbol as object or character. Many games are now part of larger timelines or

sequels, and feature recurring themes or characters in them. Mario's mustache

and jaunty smile, Chocobo 'warks' and Moogle pom-poms, Zelda's Tri-Force,

and even Lara Croft's well-endowed chest have all become symbols of their

franchises and capable of producing nostalgic and joyous emotions in their

players. This accounts for one of the reasons why the *Smash Brothers* series has

remained as popular as it has over the years for what is basically a simple and

unimaginative fighting game. All the player characters and objects in the games

have been specifically chosen for their symbolic power and references they hold

for players of Nintendo games - from Ness' bat to Dr. Mario's pill capsule. While

gameplay itself is the same as any button-mashing fighting system, players are

generally happier and more excited when playing with favorite and nostalgic

bits from previous experiences than they would have with all new characters and

items.

7. Dialogue

> *"Yuffie: Cloud, say something!*
>
> *Cloud: ...something."[44]*

Dialogue, narrative, and sound are often closely linked together in

planning stages although the three, while connected, are entirely different in

approach and effects they have for the player. Dialogue is not necessary for the

portrayal of a narrative, as seen in *Passage*, nor is it necessary for the main player

character to ever have a line of dialogue himself, as in Square's *Chrono Cross*. In

terms of crafting player emotion, dialogue has its place in drawing the player

closer into the narrative, giving him options for choice, and in allowing

characters to express themselves more clearly than with animation alone for

increased player empathy. Dialogue can also create short segments of comedy or

amusement in an otherwise heavy scene without completely breaking the mood,

and give characters more life and personality when flavored with accents or

small idiosyncrasies. A short dialogue scene can also be used to give the player a

chance to cool down after a particularly emotional scene or tiring play

experience.

However, if players are not taking an active role in a dialogue scene by

making meaningful choices in the flow of the conversation, dialogue can have

the negative effect of boring the player, even to the point of them skipping the

scene altogether. Dialogue also has the problem of being culturally bounded,

and even the best translator will have difficulty expressing some concepts in

different languages, not to mention the amount of translation time a full RPG

could take.

While a powerful form of expression, dialogue is not at its roots a

universal emotion tool, and much care has to go into its development and usage.

While necessary for many titles, the formal objects of the emotions the characters

are expressing should not be placed in the conversation itself, but rather in the environment, the animation, the music, or in other areas which are more adaptable to more people across cultural bounds. If the formal objects were solidified in this way, it would also not be necessary for characters to make the increasingly silly lines of "I feel [insert bland emotion word]".   If the formal object of their emotion were clear to the player, it would not be necessary to spell out the basics, and instead the dialogue could show the expression, rather than telling it, making it a more dynamic and effective scene.

8. Animation – Body and Facial Language

"Every word, facial expression, gesture, or action on the part of a parent gives the child some message about self-worth. It is sad that so many parents don't realize what messages they are sending."[45]

Character, object, and environment animations can be extremely effective at creating player empathy to use for creating emotions if they are carefully selected for universal appeal and direct associability with another formal object. Base animation itself, in general, should not be used as a formal object for the player, if only for the reasons that the "uncanny valley" still exists and that many movements are culturally flavored. The Uncanny Valley is a term coined for the effect that photorealistic computer graphics have on people. The more realistic

the graphic is, the more flawed it appears. When things are stylized, odd

movements and angles are ignored by the human brain, but as the graphic

becomes more and more human, every tiny wrong detail is a trumpet blast to the

brain that this *thing* is not human. Rather, animations should refer to something

else in the scene or narrative as the formal object for the emotion, serving as an

added boost for the object rather as the object itself.

The reason for this is that many animations still do not make a lot of sense

if the context is not explicitly clear. A character screaming and flailing around is

obviously upset, but without other contextual clues, the player may not be able

to draw the necessary conclusions as to *why* the character is upset, or whether

they should have any empathy for their predicament. Placing even one small

clear formal object in the scene makes it obvious why the character is upset, and

the player can now feel empathy towards the character or draw his own

emotional cues directly from the formal object itself. Even then if the animation

uses culturally references poses or symbols, such as a the Japanese tear drop or

the American flip off, it is still clear to the player what emotion is being

displayed since it is no longer integral to read it directly from the character.

As many games are attempting to become more photorealistic, it is also

important that their animations do the same and show the same sensitivity and

care to express meaning and not just movement. Many times game characters

are fleshed out with idle animations and extra secondary movements, just to make sure there is always some form of movement on the screen. While this does keep the screen constantly in motion or to some, more alive, this has the detriment of diluting emotion displayed by the character and possible player empathy when not handed correctly. People move for a reason in real life, each twitch of a finger, raise of a hand, or turn of the head. Even fidgeting is just not mindless movement – it is often caused by nervousness, boredom, or some other response the person is actively having to a formal object around them. Game characters, if trying to portray a normal human, should be no different. Movement for movement's sake does not help display anything to the player and can muddy any emotional cues the player has been trying to subconsciously pick up from the surrounding scene. While it may be pretty to look at, it again falls under Aristotle's label of spectacle, and houses no internal meaning for the player to grasp onto. It is the scenes where the animation is well planned and filled with actual meaning that the player remembers and recounts to others, not the ones with the flashiest executions.

Universally understandable facial animation is easier to achieve, as many facial ticks and movements are directly descended from early-evolutionary communications, Ekman's work in the field corroborates the effectiveness at decoding facial emotions by anyone. Even stylized rendering of faces are

comprehendible, and can in fact be easier to understand by more people as they tend to lack the added layers of cultural contexts and visual fluff that more complete renders give. (Fig 17) The figure shows scenes from *Heavenly Sword*, a photorealistic British game, *The Legend of Zelda: The Wind Waker*, a Japanese adventure game, an early South American sculpture carved of wood, and a Japanese Noh theatre mask. While all of these figures differ in realism, stylization, culture, and whether they are digital or real, they are all equally readable as basic expressions of emotion. The key is to not be afraid of exaggeration of the main qualifiers of that emotion – expanding the eyes a bit more, raising the eyebrows a little higher, etc. Stage actors are taught early in their training to use big gestures and avoid overly subtle cues, as these can be lost in the moment and stronger movements are easier and quicker to grasp by an audience member. Likewise in games, making small tweaks to make the facial emotion that much easier to read at a quick glance will make the expression that much more universal.

9. Ownership and Player Created Content

"When people lack jobs, opportunity, and ownership of property they have little or no stake in their communities."[46]

"And I would argue the second greatest force in the universe is ownership."[47]

As these politicians clearly state, ownership and possession, whether of an actual item, digital item, experience, or idea, is a powerful motivating and driving force for people. Ownership in a game does not necessarily have to refer to the explicit ownership of an actual item or property, but can also refer to a character, play pattern, or experience. In *Harvest Moon*, the player has the obvious ownership of his farm and animals, of which he makes all the decisions in upgrading and breeding, even decorating his house with furniture. However, a real sense of ownership of the experience is achieved with a strong sense of emotion the first time the player's son recognizes him and calls him by name. (Fig 18) The ownership of experiences like these in games is a universally powerful emotional force.

The gaining of and owning of items or objects in a game can also be a powerful formal object for player emotion. A weapon that players had to undergo a long, intensive, and difficult quest to achieve will have a powerful meaning for a player, and more easily create the chance that they will become emotionally attached to it.

One of the strongest ways of creating an emotional bond between the player and something in a game is by giving the player the chance to either customize the object or to allow him to make it completely from scratch. This

kind of ownership is absolute and capable of creating the strongest emotions in players. Now instead of talking about 'a' item, or 'a' character, it is now *my* item or *my* character.   This is one of the main driving forces behind RPGs where players are allowed to create their characters completely from the bottom up. Players can make everything about the character, from base stats to hair color, exactly how they want it. Now instead of things happening to a computer-generated character who may not have much meaning for the player, the character is now basically a direct extension of the player's will, creating that much more motivation and meaning.

Ownership and player-created content can also directly affect the life-expectancy of a game, for an individual or entire community. The emotional attachment and fulfillment players feel from content they have directly created can drive them to play the game for many years after its creation, or to keep old discs of character saves for decades after the game has stopped functioning. Throwing the disk away would be like killing off an old friend. EA Games' *The Sims 2*, released in 2004, is still being played and enjoyed by a growing fanbase even four years after its debut, thanks to the inclusion of player-created content. Fan created websites such as *Mod the Sims 2* or *The Sims Resource* allow players from around the world to upload and share their custom-created content. This not only keeps people interested in the game with a constant supply of new

content to explore, but it also allows an extra level of emotion to be created from other individuals directly. (Fig 19) Now besides the personal emotional attachment to a hand-crafted item, players also have the opportunity for gratitude and thanks from other members of the community, creating more emotional fulfillment and enjoyment with the game.   Some players are even able to make a quick buck or two off of selling their mods for games such as this, creating an even higher emotional bond. Now that the game has real, financial benefits for them, they are more emotionally attached.

10. Gameplay and Interaction

"Form follows function."[48]

Gameplay can be the purest form of an emotional formal object, as it is the very core of what makes a game different from other entertainment media – interactivity. Traditionally, video games have used abstracted movements and controls into keyboard keys and joystick buttons, none of which have a clear relationship to the motion they are emulating and producing. Recently however games have begun to branch out into creating new kinds of controllers and interfaces, ones that directly mimic the play occurring on screen - giving players

more direct control and feedback. (Fig20)

The *Guitar Hero* and *Rock Band* franchises of Activision and Harmonix respectively each recreate musical play using controllers shaped like guitars, drums, and microphones, allowing players a new level of in-depth play not before experienced. Now instead of punching in a sequence of abstracted buttons to hit notes, players actually hold a guitar and press buttons in the location of frets, while simultaneously strumming to keep the rhythm. These kinds of controls and play interfaces offer deeper immersion and emotional impacts upon the player than purely traditional interfaces. With a game like *Guitar Hero*, the players are no longer abstracting themselves through a random assortment of buttons to a character on the screen – they effectively *are* the rock star now, changing chords, hitting notes, and responding to simulated live fan feedback. Players finishing a particularly difficult song experience a similar joy and exuberance as a musician playing a real guitar, heightened, as in *Rock Band,* if the accomplishment was performed with friends. This kind of immersive gameplay is one of the strongest kinds of formal objects for the creation of emotion in games.

The Nintendo Wii is a console specializing in utilizing controls and play that mimic real life motions, with games ranging from tennis to bowling to darts. People who have never considered themselves gamers find themselves having a

genuine expression of joy and happiness when playing the games. Gameplay that is at its core intuitive and natural has the best chance of becoming a formal object for the player as they are not having to constantly analyze and remember intricate key-presses and combinations.

When developing formal objects for emotion, it is also important to note that while a specific object will work to create an emotion, this emotion on the whole will last for only a short while, and will have to be reapplied with another formal object soon after. Continual use of the same formal object or same kind of formal object will also lessen its effect until it may eventually be completely ineffective. This is often seen in horror games or movies where enemies jump out onto the screen to scare the player. The first few times it may work, but eventually the player will learn to expect it and will not feel any fear at all. Mixing up the different emotions as well will heighten each subsequent emotion – for example, mixing in a moment of happiness amidst moments of fear. Too many fear formal objects in a row will again desensitize the player to their effects and the game will lose its emotional luster. Games can reach increasingly long lengths now, and it is important to remember to keep emotional highs and lows constantly changing as to keep boredom and monotony at bay.

Visual Component

      The visual component of this thesis uses industry-standard game design methodology and mechanics to create a production quality, non-digital RPG-like tabletop board game that isolates the players in a non-graphical, audio-void environment in which their reactions to emotional cues can best be judged.

      Relying solely on visual cues for the creation of emotions, such as purely depending on graphical facial displays, can lead to confusion on the player's end. For example, oftentimes games use visual cues, such as shaking or trembling, to describe the emotion they want to be felt by the player. However, this is attacking the problem of emotion generation from the wrong end, from the effect rather than the cause. Emotions are formed by a correlation drawn between the person and a formal object, which can be either visual or mental. Once the emotion is created, then the body reacts to it, such as trembling during fright. However, some emotions do not produce unique bodily reactions, such as trembling for joy or trembling in fear. Animating this end result, trembling, does not necessarily send the right message to the player for which emotion is being displayed, especially if the context is culturally biased. Instead, more effort and care can be placed in creating the formal object for the appropriate emotional

response, which in itself does not have to be visual and can take on many forms. Possible examples of formal objects in this case could be referencing an earlier scary plot point, a non-linear pacing of an approaching foe, audio samples, spoken dialogue, character flashbacks, jerky camera movements, a growling dog, placing the player in a situation where one choice determines the fate of another, or even a simple timer which is rapidly counting down towards 0:00.

So by creating a system that is devoid of higher end graphics and animations, the attention of the formal object is turned towards these other methods so they can be better judged by the player responses. The idea is that if the formal object can be solidified in this manner, then any higher-end facial animations and body movements would only enhance the experience for the better, instead of creating confusion or misunderstanding.

Using recordings of player facial, corporeal, and verbal expressions from video, written poll cards, and post session interviews as raw data, it would be possible to see whether these methods of creating the formal object were viable. The players themselves would be drawn from different nationalities, genders, and age groups to get a less-biased response and to see if the responses were universal. Running graphical regressions on this data, it would be possible to see correlations between the different techniques to elicit player emotion to see

which worked better, and whether age, race, or nationality had any significant meaning, thereby showing a possible case for universality.

The board game itself consists of a map of three countries, where the northern neighbor, Ildamar, is waging war on the southern continent of Rona. Melusine, the island nation where the players are from, is caught in the middle of the encroaching battle. (Fig. 21) Players move their pieces around the board and play cards during their turn. The system utilizes a card deck approach to detail narrative aspects, give quests, and give the players opportunities to play actions against each other. They collect Faction Points for each country, a basic, tangible, representation of loyalty toward any of the three countries. Play takes place over turns: seasons, and rounds: years. Each round consists of 4 turns, each turn corresponding to one of the seasons. After a set amount of years has passed, the game concludes and the victor decided. The original design called for a Gamemaster to run the game and assign quests and determine results, but upon simple playtesting with non-gamers and casual players, the inclusion was too confusing for those unused to traditional table top RPGs. This led to the development of the card system which is self-sufficient.

Players are given, or choose, one of 10 profession types: Fisher, Rancher, Woodsman, Trader, Mercenary, Blacksmith, Inn Wench, Village Bum, Cleric, or Farmer. (Fig 22). Each profession has a special skill or ability, and a unique

resource allotment at the beginning of their turn. Each profession also has a

specific combination of resources in which to buy Faction from countries, much

like bribing for influence. These professions are slightly and carefully

unbalanced, to drive player cooperation and competition without being

completely unfair or 'broken'. Each profession has a unique player piece, some

of which may be more appealing to a player than others. These player pieces are

all realistic portrayals of people in their profession. This was a conscious

decision as it is easier to create empathy towards another 'person' than a colored

brick.

There exist four types of cards with which the players interact: Resource,

Action, Quest, and Event cards. The main deck of cards from which the players

draw consists of a random shuffle of the Action and Quest cards, of which there

is roughly a 2:1 ratio. Quest cards are fairly straightforward: At the top of the

card is a brief narrative blurb, attempting to draw the player into the current

conflict and explaining the motivations behind the Quest. This is in no way

necessary to understand to perform the Quest, although it does add color and

insight for the player, and may help determine whether the player will accept the

Quest or not. This is followed by a brief outline of what the player needs to do to

accomplish the Quest, as well as the rewards for completion (Fig 23). Quests are

predominately geared towards the accrual of Faction. Some Quests require NPC

involvement, or cooperation between other players, while others foster

competition and aggressive behavior. Without using emotive terms or blatant

descriptions, each Quest embodies one of the basic primal emotions and how one

might be stimulated.   A player may only have one active Quest at a time,

holding any other Quest cards in his hand.

Action Cards were created with the idea of changing individual player

states on the board, with actions ranging from acquiring resources and points to

hampering other players - including the player who drew the card. These are

primarily used for more surprise and disgust emotions, especially when played

in conjunction with other player's current Quest ambitions. Action cards may be

played at any time, by anyone, during any turn, and are resolved backwards

much like a *Magic: TheGathering* stack. In playtesting so far, these have shown to

be highly useful for the creation of the more 'negatively' minded emotions in

their targets.

Resource Cards drive the economics of the game and consist of the eight

major commodities of the world: fish, grain, livestock, wood, metal, medicine,

alcohol, and gems. (Fig 24) Resource accumulation and management is one of

the major methods of board control and victory, and each individual profession

is allotted a unique set of resources at the beginning of his turn. Herein is also

built a small amount of unbalances, first to detail the real-world differences

between say a fisherman and a trader, but also to include a small level of player perceived 'unfairness', which besides eliciting emotion on its own, also helps to drive ambition and competitiveness.

Event Cards are the main narrative backbone of the game, giving meaning to the actions of the player's choices in the war as well as creating board-wide changes for all the players. At the end of each year, all the Faction Points are tallied to determine which country is currently 'winning' the war. There are four stacks of Event Cards, one for each country and one for neutral, in the case of a tie. A card is drawn from the respective stack, which details a brief narrative exploit of that country and then any consequences for the world and players. In general, players who support that country are rewarded for the year with either items or rule changes in their favor, and other players are punished in a like way.

Faction Points are the main scoring system of the game, with separate Points tokens being available for Melusine, Ildamar, and Rona (Fig 25). Completing Quests, stealing, or trading between players can all net a given player Faction Points. Each token roughly embodies one degree of loyalty to a given country, and it is possible for players to remain technically neutral by a careful control of Points. Each profession has a unique combination of money and resources in which they can attempt to bribe and buy their way into favor with any given country.

Victory is determined at the end of a set number of years, a suggested time amount being between 3 and 5 years, or 12 to 20 rounds, for a game time of roughly one hour to two hours. At this time, players may exchange or trade all remaining coins and resources for Faction Points, allowing players to 'hold out' in an attempt to confuse their current standings. The Faction Points are tallied together across all players at this point, and the *country* that received the highest total number of Faction Points is declared the winner of the war. Then, the *player* who had the most amount of Faction for this specific country is declared the overall winner. This makes it completely possible for a player, who may have the most Faction in the game, or the most for a different country, to still be beat by a player with better strategy or resource control. This has also had the affect that players need to keep a constant lookout for what everyone else is doing, and to foster cooperation and competitiveness even more.

What I wanted to incorporate, in an RPG fashion, was the inclusion of multiple possible play patterns, allowing the players multiple ways to reach victory. One possible method is through strict economic control of the board and resources, gaining Faction through trade-in and buying, being less dependent upon Quests. Players may also steal all their rewards from other players, capitalizing upon their hard work. There is always the completion of Quests and judicial use of Action Cards to gain Faction as well. Utilizing any combination of

these styles, or others the players may devise, there area wide variety of avenues

that the players can take at any time.

A complete copy of the rule book is included in the Appendix at the back

of this document, detailing all aspects of game-play and a run down of all the

included pieces.

Method

The General Emotion Creation Method

When I began creating the game, I started with only the basic idea of creating specific emotions consistently in players, and began to brainstorm different ideas on how this might be possible. Eventually I settled on a war scenario with people divided into factions, providing the motivation and narrative setting for the game itself. Factions here serve two purposes – one to create artificial loyalties easily and effectively between players, and two, to create a dynamic system where defining focal objects would be easily attained.

Having set the theme of the game, I then began to add in focal objects for individual emotions one at a time. It quickly became apparent that games are better suited to expressing some of the primal emotions than others, all due to the player having first to combat apathy and to *care* about his evaluation of the given situation.

Surprise was easy, if perhaps weakly expressed on the surface. One focal object for surprise is the unveiling of an hidden item to reveal an unexpected result. Having players draw from a card deck of both possible positive and negative results could create a viable setting for surprise to be felt. The Event

Cards were also then added at a later date to not only reinforce the narrative, but to enhance the element of surprise.

Happiness or Joy was also not too difficult to theorize. Possible universal focal objects of happiness include: unexpected boons being delivered to oneself or to someone who is cared for, solving a problem or discovering an answer, realizing the successful completing a goal or plan, thwarting a foe's goal or plan, or oddly enough, collecting. Some Action Cards and Quest Cards provided the first couple of options, and collecting resources and Faction Points appeased the side of human nature that enjoys amassing like objects. In keeping with the RPG feel of the game, I wanted to give the players multiple play paths to victory, not all of which were necessarily obvious at the beginning of play. Players who figured out these new avenues would then feel some modicum of happiness after discovering their new ability.

Sadness followed along closely with happiness, in that many of the focal objects are directly opposed to one another. Sadness could be induced by penalties being unfairly (or perceived as unfairly) inflicted on oneself or on someone who is cared for, failing to reach a desired goal or outcome, being trumped by an enemy, being betrayed by a friend or ally. Sadness, however, proved to be a bit more difficult than happiness, as it does require some amount of caring on the player's part. However, this is where I had hoped the Faction

system would begin to play out. Action and Event Cards, as well as certain die

rolls, made it possible for players to lose items or points, and having players

almost inevitably backstab each other through alliances could create some feeling

of sadness, especially if the player felt he was being singled out by the others.

I thought it would be best to create disgust by allowing players to become

disgusted by the actions of other players, rather than through the randomness of

an apartheid system. I incorporated this ability into one of the possible play

paths to victory, by effectively rewarding players who assaulted and stole from

their fellow gamers. Ingenious playtesters of the prototype even began to chain

their attacks together using both die rolls and cards combined, which created a

visible level of disgust on the victim's perturbed face.

Anger also proved to be a little on the tricky side to deal with. For a

person to feel angry, he first needs to feel unjustly wronged, and then *also* wish

to do something to either retaliate or see that it does not happen again. For the

player to really feel wronged, he first would have to care about whatever was

actually done to him. From past experiences in seeing people deal with digital

games, annoyance is usually the emotion associated with a game which has some

degree of system unfairness, not anger. It is harder to feel angry at something

which has no reasoning faculties and acts out of pure nature, than to feel angry at

something that actively reasoned and was judged to strike out and harm another.

Here too then, anger would have to arise from other player interactions, and not something that a game system did indiscriminately to a random person. One way I attempted to design this in was to reward players by giving them opportunities explicitly stating to team up together against another, some of which required allies to turn against each other to succeed.

Lastly I came to fear. What is perhaps one of the best documented and easily attributable emotions in real life became a large problem in a game setting. To invoke, fear absolutely requires the player to care, care for oneself, care for another, care for a thing, etc. However, regardless of levels of immersion, games generally do not have real world consequences, and establishing a readable level of fear response in a player who is aware of the non-real circumstances of the system is tricky at best, and impossible at worst. One game which did have real life consequences was the anteing system of *Magic: The Gathering.* Players at the start of a game anted one card each into a pot and the winner of the match would receive both cards. These cards anted were randomly drawn from the deck, creating much player anxiety and fear. While this system did effectively create fear of losing a valuable card – a very real and tangible outcome - many players opted out of using the rule altogether and eventually the rule was removed from tournament play as well. Even though the system effectively created fear in players, the prospect of actually losing real world money turned off many a

player. Sometimes it is possible to create fear of losing some kind of hard earned

reward in a digital and non-monetary realm, but this kind of fear is more akin to

apprehension than true full-fledged fear.

Besides caring, the player must also have some form of foreknowledge or

insight into what a given circumstance and his possible choice of reaction options

could mean for him. For example, if a deck of cards contains a card that would

make the player instantly lose the game, the player would have no reason to fear

drawing a card at random if he was not already aware of that particular card's

existence. And even then, if the player felt that the odds were large enough in

his favor, he would tend to downplay the fear of a possible unlucky draw. Only

if a player of this game was intimately familiar with the possible bad options and

with the possible rough odds of attaining them, would he have any reason to

fear. Fear then, I had to hope, would be displayed in players replaying the game

who were already familiar with some of its aspects and abilities, with little to no

chance of being expressed with beginning and new players. For this reason, I

decided it would be best to approach the play pool by using at least one control

player, someone who had played the game many times before, mixed in with

multiple new players.

Data Gathering

The basic method of data gathering was straightforward, consisting of a different assortment of volunteers who played through one run of the game and then answered some brief questions about their experience. The polls varied from straightforward fill in the blank answers to more open-ended paragraph-style responses, to both get a clearer idea of the experience and to decrease bias. In order to avoid complications arising from volunteers who were less savvy in judging their emotional states, each individual play session was also recorded on film, with special attention being played paid to the players' dialogue, expressions, and body movements. Each play session also included someone as a control who had played the game previously at least once and was already familiar with the rules and systems presented in the game.

Participants for each test were recorded along with their age (a 22 year span), gender (7 male, 5 female), nationality, and type of gamer they are: non-gamer, casual, or hardcore. These data were then used in determining the effectiveness of each emotional method. The release forms for those participants featured on the attached DVD are included in the appendix.

Qualitative analysis and annotation of the video footage was performed with ELAN 3.5[49], and all data was compiled using Microsoft Excel. Data was set

on a range of one to five, with five indicating that the emotion was particularly

strong or often experienced, and one, that it was rarely experienced.

Data

Figures 26 through 32 show the compiled charts of the recorded player

data, regressed against age, gender, and gamer type. There were four different

nationalities of players who participated in play testing, and two of the three

gamer types as defined were represented. The test was not able to find non-

gamer volunteers to play test the game, so results against gamer type are a bit

inconclusive.

Results confirmed most of the predicted responses to specific cards and

scenarios developed for the game. Figures 26 and 27 show the most and least

frequent emotions felt, as recorded by players and corroborated by video

recorded footage. Players were generally happy as they spent much of the time

developing strategies and solving small puzzles and problems in their path to

victory. Specific instances which begat happiness were the obvious, winning the

game, but also being helped by a friend, messing up an enemy player's strategy,

and fulfilling a particularly lengthy or challenging mission the player had set for

himself. Oftentimes it was not through specific quests or actions that a player

was made happy, but rather from outcomes where they had some say in the final

goal. One player was particularly happy each time she managed to double her

fortune through strategic economic victories, and not through finishing a goal

the system explicitly stated for her to finish. Retaliation for past wrongs

performed by other players also created happiness in many of the players, and

since many perceived wrongs were performed by players and not by a system,

there were many options for retaliation. The very nature that the test was a game

itself also created happiness in some players, as the very act of play not bounded

in reality made them happy.

Fear was also expected to be the least often felt from the very nature of the

way the emotion is created, and nearly half of the players recorded this as their

least-felt emotion. In all of the games tested, at least half of the players were new

to the game and had no previous knowledge of the systems or available options.

Only the most experienced player recorded fear as her most-often felt emotion,

since she alone had the necessary information to know all possible outcomes for

her actions. It also so happened that this player was also the one most obviously

invested in winning the game each time she played and had developed the most

amount of caring when playing. This particular player also developed a

connection with one of the countries, Ildamar, and made a point of supporting

the faction whenever she played, even if it was against an obvious course to

victory. When this country began to lose, she again expressed mild fear and

agitation, over nothing more than a symbol.   So while fear was a very real

emotion for this player, it was only developed by long-term playing and was not immediately felt by new, unknowledgeable players.

Anger was interesting as it appeared second on both the most-felt and least-felt charts, recorded three times and two times respectively. Anger was often felt by many players who were repeatedly picked upon by other players, which happened in two of the three games. Anger was also minutely expressed at the system itself for random bits of perceived unjustified wrongdoing, but more of the emotion was felt towards other actual players. At the same time, it was also least felt by some players for the same reason as fear – a level of care either for the game pieces, system, or even for winning was not present, so some players had no reason to get angry when something bad happened to them.

Gender appeared to play no significant role in the development of emotions, with recorded averages being either nearly the same or within one standard deviation from each other. For both genders, happiness and surprise were expressed the most often, while fear was conclusively the least. Figure 30 shows the range of emotions recorded from one to five graphed against each specific emotion against gender.

Gamer types, whether the player considered himself a hardcore or casual player, also had no significant effect on results, and the chart is nearly identical to the one presented in Figure 30. (Fig 32). Fear again was least recorded, and

surprise and happiness were often recorded. There was an increase in the

amount of sadness recorded by casual players as compared to hardcore players,

which was primarily due to one particular causal player who was routinely

targeted by all the more experienced players in one game.

Age made a more significant difference to the emotions recorded than the

other regressions performed, with large average differences being produced

between the span of the player ages, a total of 22 years difference. (Fig 29).

Overall, happiness seemed to be the least effected by player age, while all the

other emotions fluctuated much more widely.

Games with different amounts of players participating also created an

interesting trend, as detailed in Figures 28 and 31. While this was not an original

testing criterion, some trends began to emerge when compiling the data together.

For Figure 28, Game 1 had three players, Game 2 had five, and Game 3 had 4

players. Their individual responses are recorded in Figure 31.

Discussion

Overall, the systems developed for creating specific primal emotions

across the different kinds of players seems to have been successful for the players

tested, but a much larger selection of play testers and volunteers would be

necessary for any firm conclusions to be drawn. Also, biases as regards to social

standing, family, education, race, out-of-game player connections, or a complete

gaming background were not taken into account by the parameters of this test.

As expected, only the control players expressed the highest amounts of

emotions felt, as they had developed the necessary care and foreknowledge to

feel many of the emotions. These control players were the ones expressing the

highest levels of fear, and surprisingly, no pun intended, the highest levels of

surprise. One would expect *a priori* that a player who had played the game more

often would have fewer opportunities for surprise to develop; however, the

reverse is actually true. While new players were sometimes surprised at the

draw of a card, these were small surprises every time and never game-changing

ones. The very fact that these were new players meant that they could not be

surprised as easily – they had not yet acquired enough knowledge about how the

systems worked to be surprised by them. Likewise, the more experienced

players had pre-developed notions of how the game was played, how it worked,

and they knew in advance what victory strategies worked, at least they

perceived they knew.   However, the more times they played, the more they

learned about the system and the possible outcomes of the game, which broke

down their previous conceptions, and they were more surprised than someone

picking a card at random. Herein lay the greatest means of developing surprise

universally, and it was achieved by chance - since the game was only designed to

be different every time for replayability's sake. By allowing the players to think they understand all the nuances and then changing something even small, the ability to generate surprise was greatly increased.

Another interesting trend across the different games was the amount of anger and disgust felt. The game with the fewest amount of players had the smallest amounts of disgust and anger recorded, while the game with the largest amount of players had the highest amount. This seems to suggest that anger and disgust were both strongly tied to interactions with other players, and not with the system itself, which corroborates earlier hypotheses. While this does not mean it is not possible to achieve these emotions in a single-player game, it would be much harder to do so, for the reasons stated previously. People only feel truly angry when they feel they've been wronged by something which made an active choice to do so. This does leave an opening, however, for single player games with particularly clever and well-developed AI. Although most people do know that computers do not think and reason in the human sense, many people while playing a computer game will act and talk as if the AI (if it is a good one) is actively trying to upset them, and making decisions to do so. So a better way of stating the creation of anger and disgust, then, is to say it is best created by other intelligences or the perception of other intelligences, whether

they are actively reasoning or not. As long as the wronged player feels that it

was an active choice against him, he will feel angry or disgusted.

Emotions mapped across ages had an interesting flow to the graph,

although some of this may be due to outside influences and biases such as some

players having children or some players knowing each other in advance. Anger,

sadness, and fear all appeared as small bell curves, happiness was basically the

same, and surprise and disgust basically climbed with age.   The test seems to be

rather inconclusive with such a small sample size, with the exception that

happiness seems to be universally felt across the selection. Some possible

theories are that the older players, who have had many more years to form

notions of how games work and should be played, have more chances to express

surprise, or that older players who have children are less likely to express anger.

However, there are not enough data to conclude whether the systems worked

across all ages. More tests with a larger spread of player ages, perhaps twice as

large, would be necessary.

Differences in gender, however, were insignificant, putting to rest the idea

that female or male gamers will be more prone to one feeling or another. The

largest difference was between anger expressed, with a recorded difference in the

averages of 1.2 points. One particular male player recorded consistent high

anger remarks on the poll cards, even though video evidence of vocal, facial, and

body language suggested otherwise. His remarks were included as recorded for completeness, but further tests of anger would be more conclusive and could help lessen any inconsistencies. However, overall the results point to gender as having no significant bearing on emotional creation in games. All games were co-ed, and some single-sex play tests could provide more conclusive evidence.

Hardcore and casual players also expressed the same significance of emotions recorded, with the largest difference being a 1.23 rise in surprise expressed by casual players. Hardcore and casual labels in this sense had nothing to do with how many times a player had played this particular game, but are rather labels thatwere assigned based on overall gaming experience and what kinds of games the players liked to play.   Players who tended towards playing non-digital games or the very small computer game labeled themselves as casual, and the majority of the console players labeled themselves hardcore. Taking these labels and their meanings, the possible reasons why casual players felt more surprise than hardcore players are that these people are dedicated board game players, and are the ones with the largest amount of pre-existing knowledge about how board games work. Fear was often expressed by the casual players as hardcore players tended to single them out and target them for adverse effects. Whether this was by pure chance or by foreknowledge of the players is unknown, and may have had some effect on the results.

Conclusion

The ideas presented in this paper have been successfully combined and applied to the creation of a board game that sought to create emotional responses in players using dependable and predictable systems across the selected demographics. While the ideas and systems were created for a non-digital board game, they are directly applicable to other forms of gaming, whether digital, non-digital, or in other forms such as in alternate reality gaming.   Players who have emotional experiences with their games will be happier, more fulfilled players, having connected with these games on more than one obvious, physical level. Incorporating these emotional moments and ties is not a difficult feat, and they can be either directly built with the systems from the ground up or later applied to existing systems with similar results.

Studies of emotional effects on players in games are by no means complete, and many more tests and research could be performed in the future to see into how emotions work across online play, single-sex games, or even games involving multiple species. Emotions are powerful motivators for both action and thought, and a deeper understanding of how emotions affect and interact with games can only create better immersion and play experiences for the sometimes overlooked yet most important piece of a game: the player.

Figures

Fig. 1[50]

Example of the text-based interface from *Planetfall*

Fig. 2[51]

Return to Zork's filmed sequences and button interface

Fig. 3[52]

Cutscene depicting the death of Aeris

Fig 4.

Ending of *Final Fantasy X* when Tidus dematerializes, much to many players' dismay

Fig 5[53]

Screen capture of the game's eight characters and interface

Fig 6.[54]

Roach and Nariko
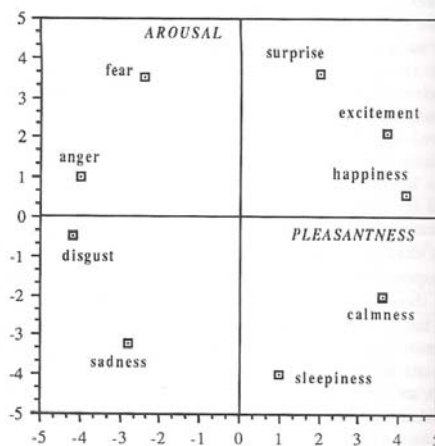
Fig 7[55]

Circular Structure of Emotions mapped onto 2d space

Fig 8[56]

Amaterasu from *Okami*
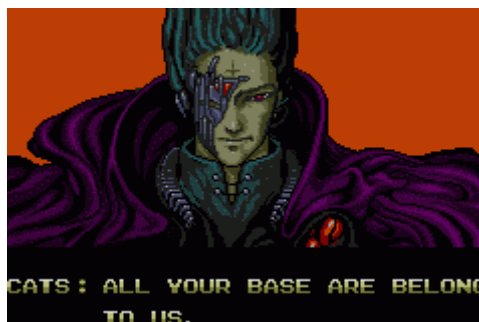
Fig. 9[57]

An Example of *Zero Wing*'s erroneous translation

Fig 10
Passage's game space

Fig 11[58]
Cosplayers from Final *Fantasy* and *Metal Gear Solid*, adapting both looks and typical stances and movements into their persona.
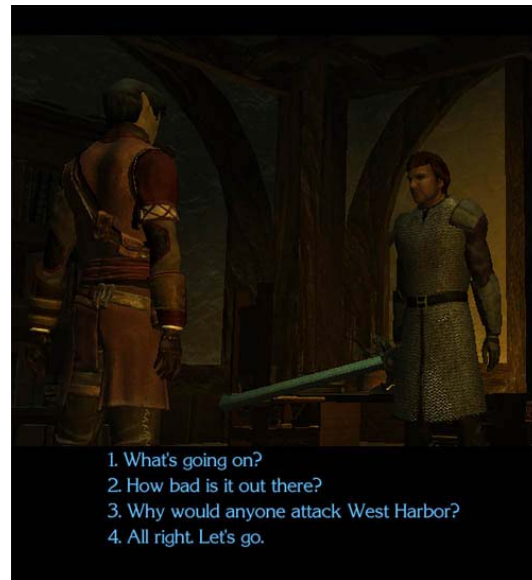
Fig 12.
Sample Dialogue Option Tree for *Neverwinter Nights 2*

Fig 13[59]
Examples of leaders of groups and main characters in red colors. From top –
Optimus Prime (*Transformers*), Papa Smurf (*Smurfs*), Red Lion (*Voltron*), Red
Ranger (Power Rangers), Kratos (*God of War*)
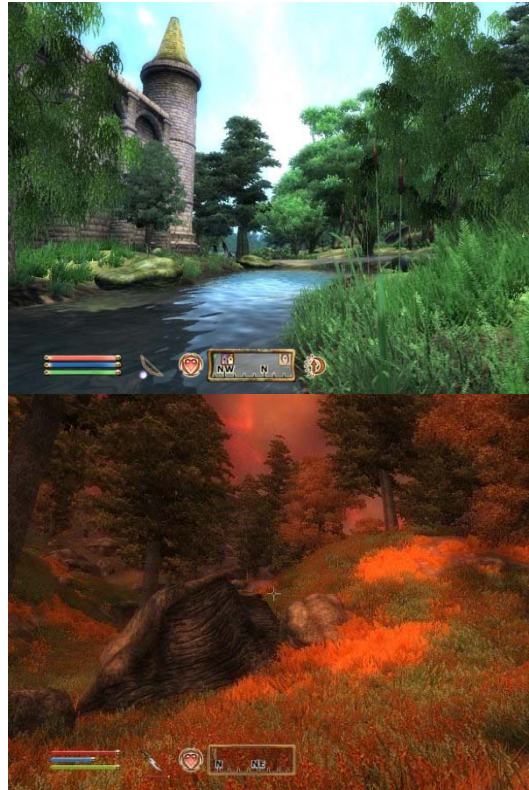
Fig 14[60]

Before and after shots of the dynamic lighting effects of Oblivion gates
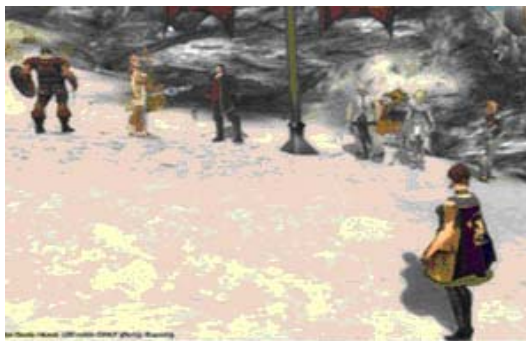
Fig 15

Guild Wars. Top: Bad NPC placement. Bottom: Good NPC placement
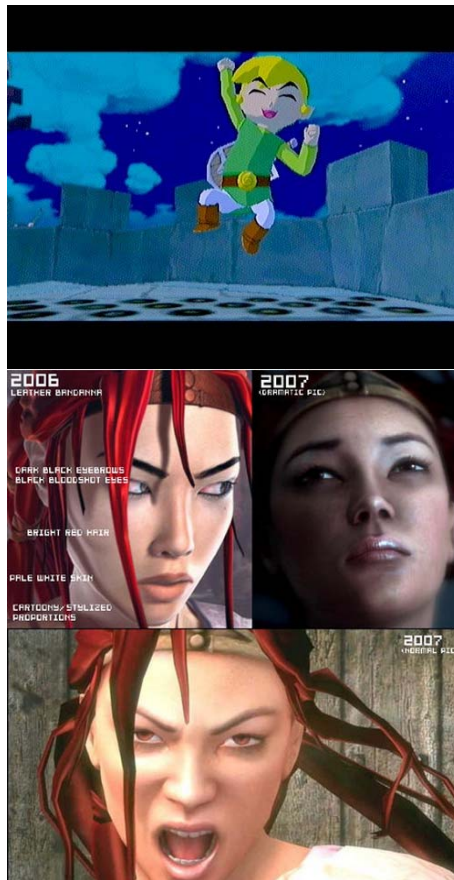
Fig 17[61]
Different kinds of digital and physical renderings, depicting joy, anger, sadness, and surprise.

Fig 16
Symbol of Yevon

Fig 18[62]
In *Harvest Moon*, interactions with your family can be emotionally fulfilling.
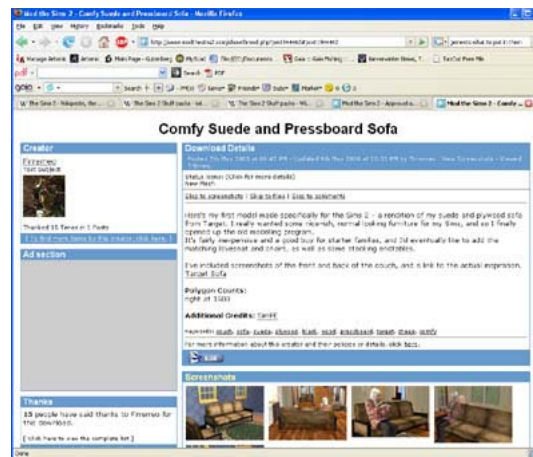
Fig 19
One of the author's shared mods for *The Sims 2*.

Fig. 20[63]
Top: *WiiTennis*
Bottom: *Rock Band*
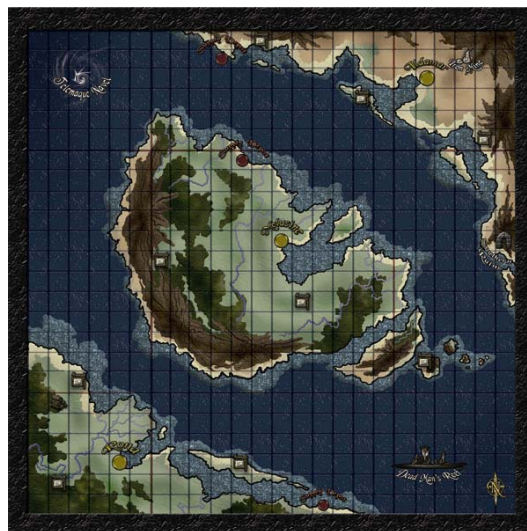
Fig. 21
Game board: Map of Melusine

Fig. 22
Example of the Cleric Profession Card

Fig. 24
Example of Resource Card: Grain

Fig. 23
Quest Card Example

Fig.25
Melusine Faction Point Token
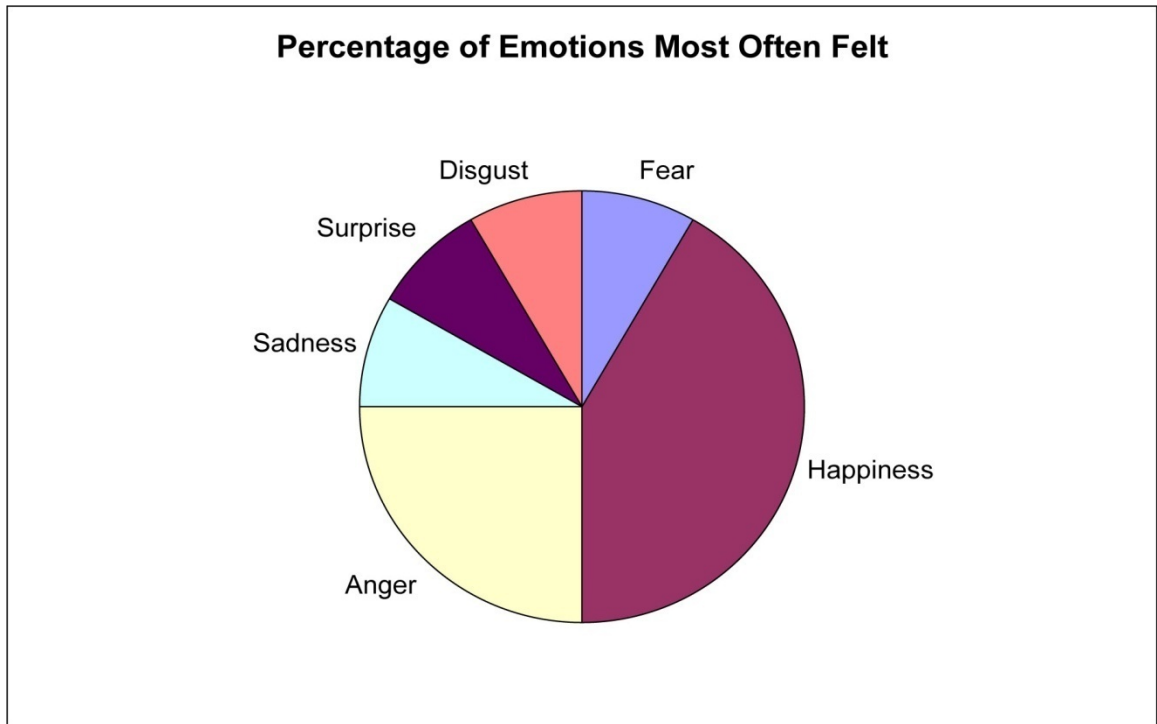
Fig. 26
Percentage of Emotions Most Often Felt Across
All Play Sessions
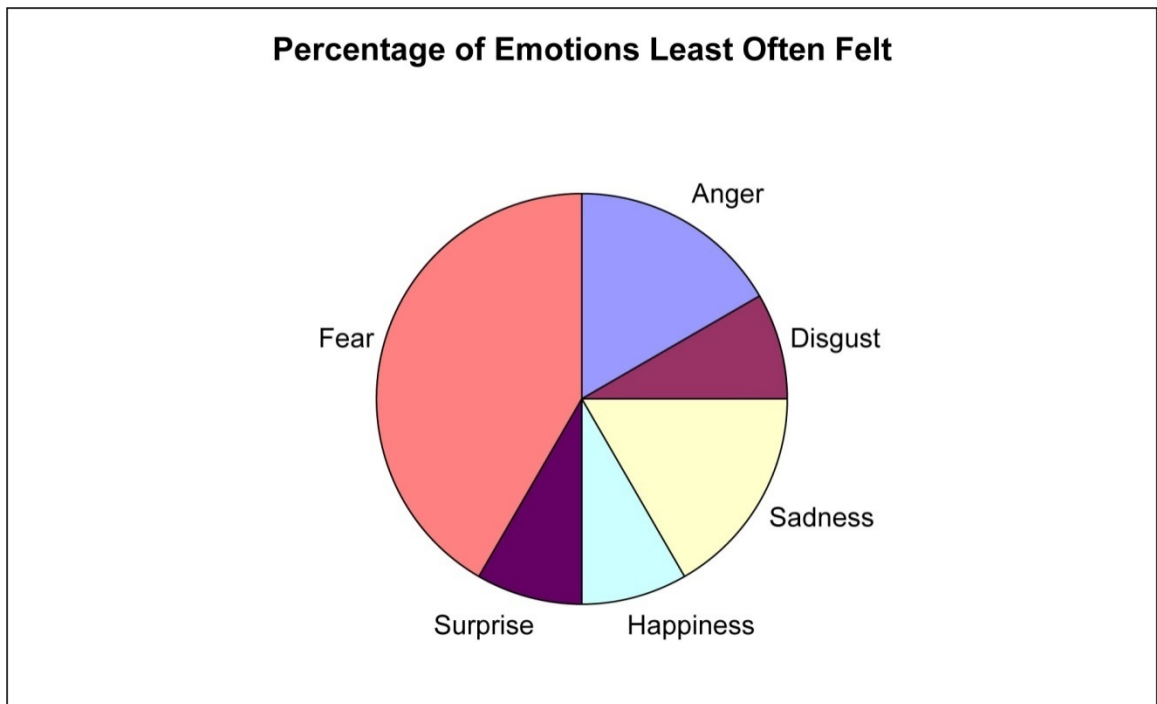
Fig. 27
Percentage of Emotions Least Often Felt Across
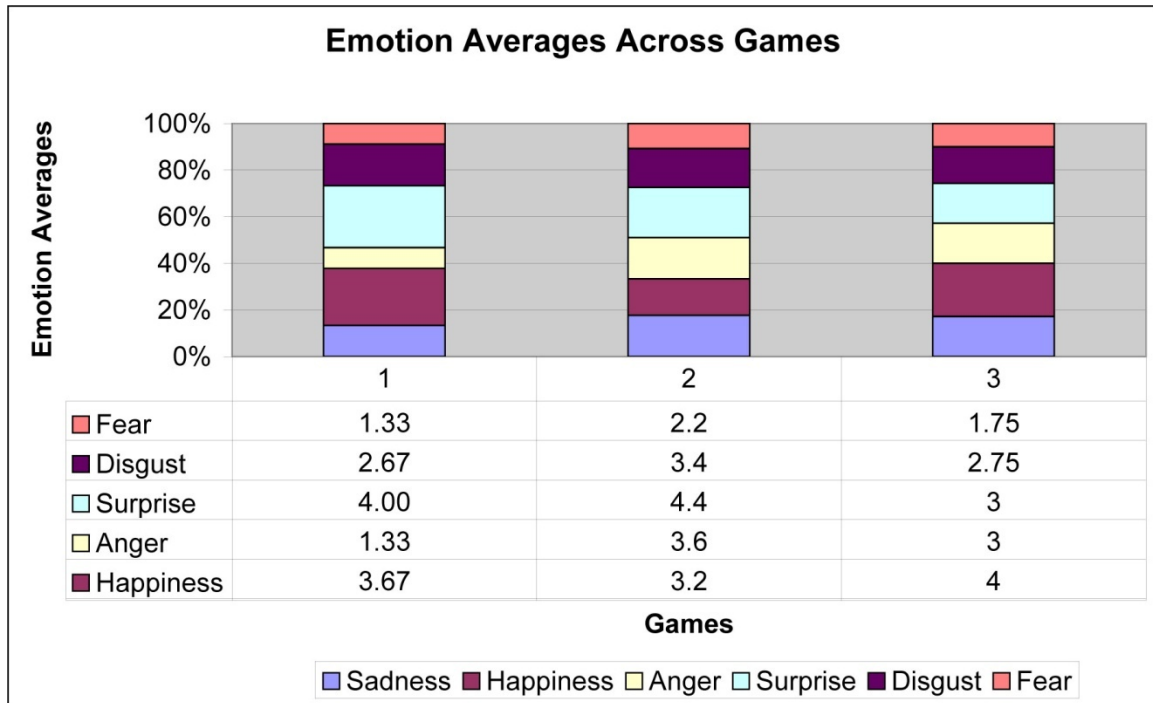All Play Sessions

Emotion Averages Across Games

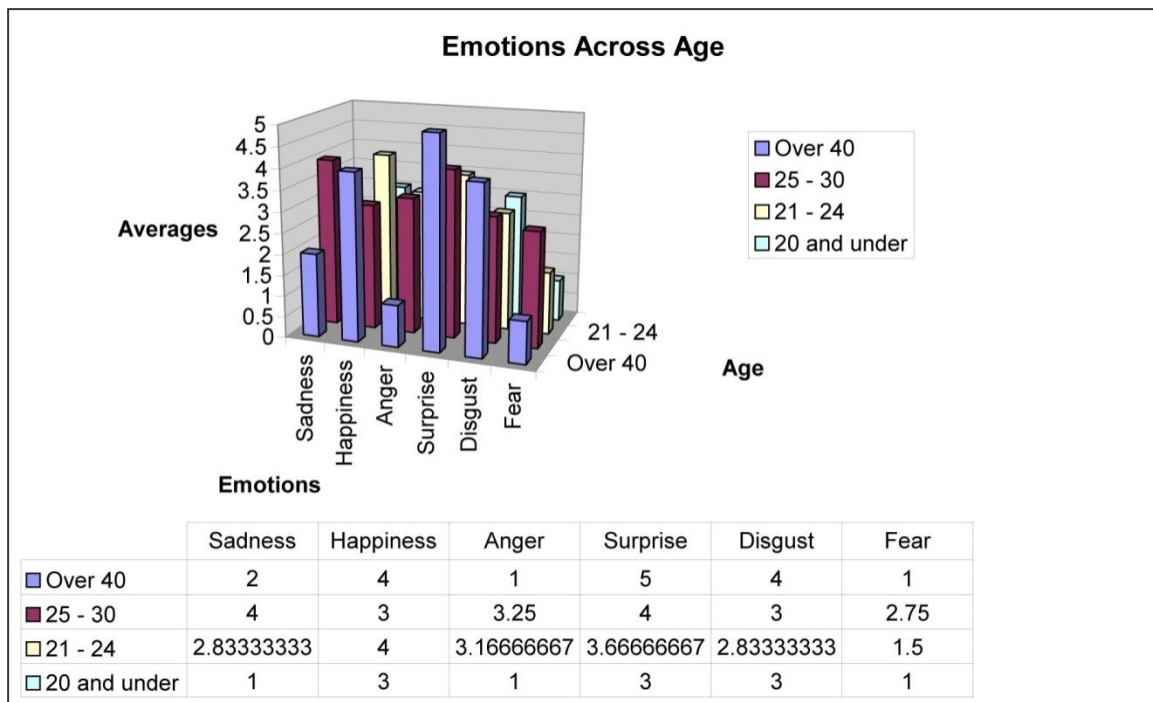| Emotion Averages	Games		
	1	2	3
■ Fear	1.33	2.2	1.75
■ Disgust	2.67	3.4	2.75
□ Surprise	4.00	4.4	3
□ Anger	1.33	3.6	3
■ Happiness	3.67	3.2	4

□ Sadness ■ Happiness □ Anger □ Surprise ■ Disgust ■ Fear

Fig. 28

Averages of Emotions Recorded Compared Across Games

Emotions Across Age

□ Over 40
■ 25 - 30
□ 21 - 24
□ 20 and under

	Sadness	Happiness	Anger	Surprise	Disgust	Fear
□ Over 40	2	4	1	5	4	1
■ 25 - 30	4	3	3.25	4	3	2.75
□ 21 - 24	2.83333333	4	3.16666667	3.66666667	2.83333333	1.5
□ 20 and under	1	3	1	3	3	1

Fig. 29

Frequency of Emotions Recorded Compared By Player Age

Frequency of Emotions Across Gender

	Sadness	Happiness	Anger	Surprise	Disgust	Fear
Male	3.43	3.29	3.43	3.86	3.14	2.14
Female	2.4	4	2	3.8	2.8	1.4
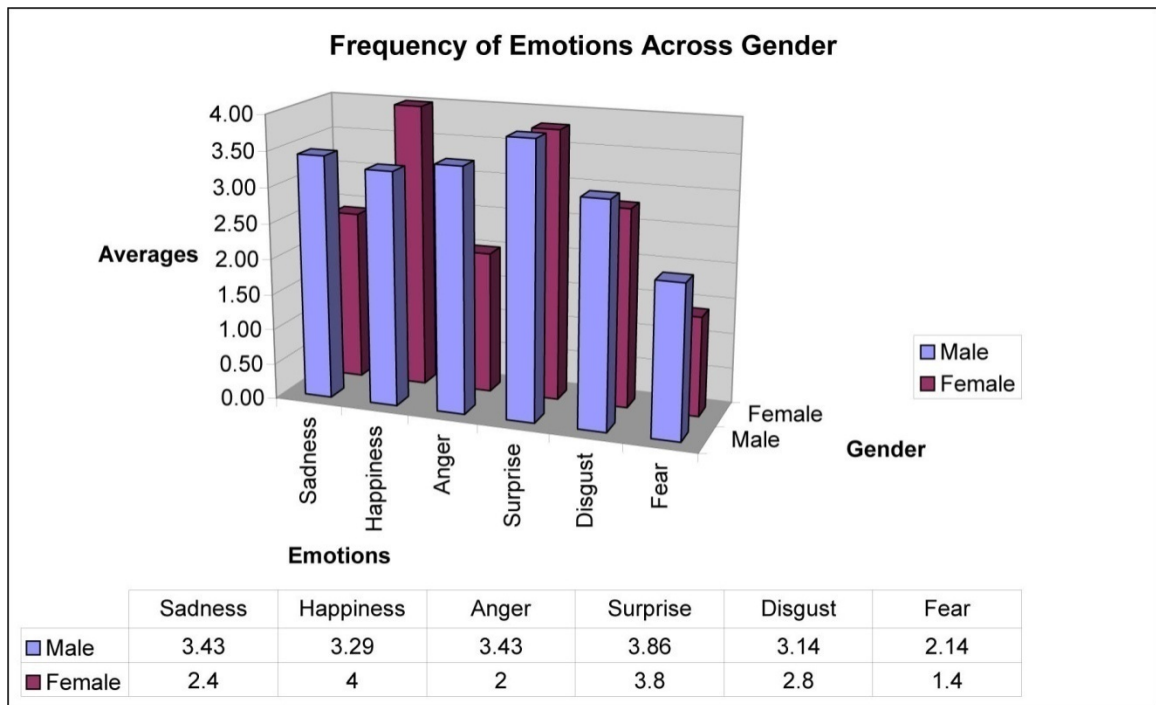
Fig. 30
Frequency of Emotions Across Player Genders

Total Emotions Recorded By Player By Game

Total Emotions Recorded (y-axis)

	1	2	3		5		7	8	9	10	11		13		15	16	17	18
Fear	1	1	2		1.33		3	3	1	2	2		2.2		1	2	3	1
Disgust	4	3	1		2.67		3	5	2	4	3		3.4		3	2	3	3
Anger	1	1	2		1.33		4	5	1	3	5		3.6		5	1	2	4
Surprise	5	3	4		4.00		4	5	5	4	4		4.4		2	3	3	4
Happiness	4	3	4		3.67		3	1	4	5	3		3.2		4	5	4	3
Sadness	2	1	3		2.00		4	5	4	3	2		3.6		4	2	4	2

Players Separated By Game, With Averages
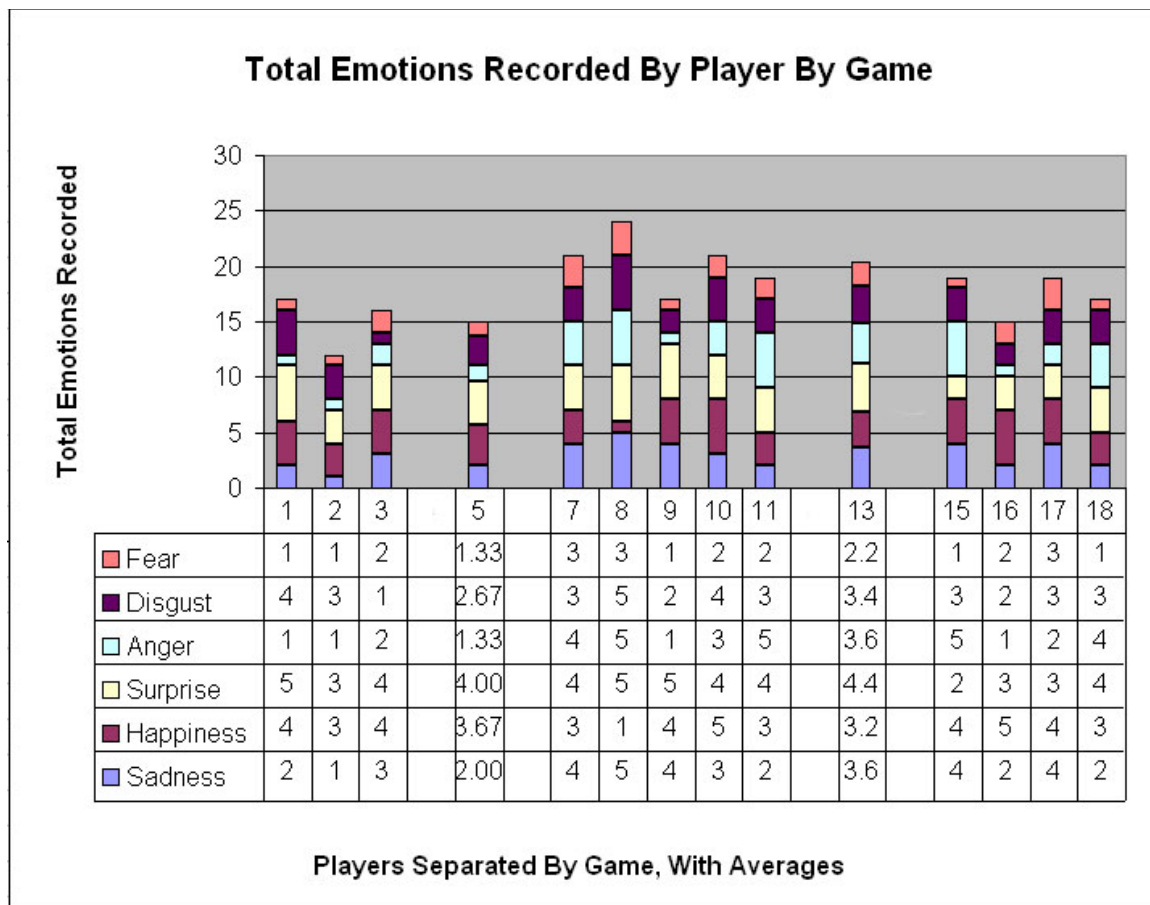
Fig. 31

Comparison of Emotions recorded by Player

Emotion Averages across Gamer Types

Emotion Averages

	Sadness	Happiness	Anger	Surprise	Disgust	Fear
Hardcore Avg	2.57	3.86	2.86	3.57	2.86	1.43
Casual Avg	3.6	3.2	2.8	4.2	3.2	2.4
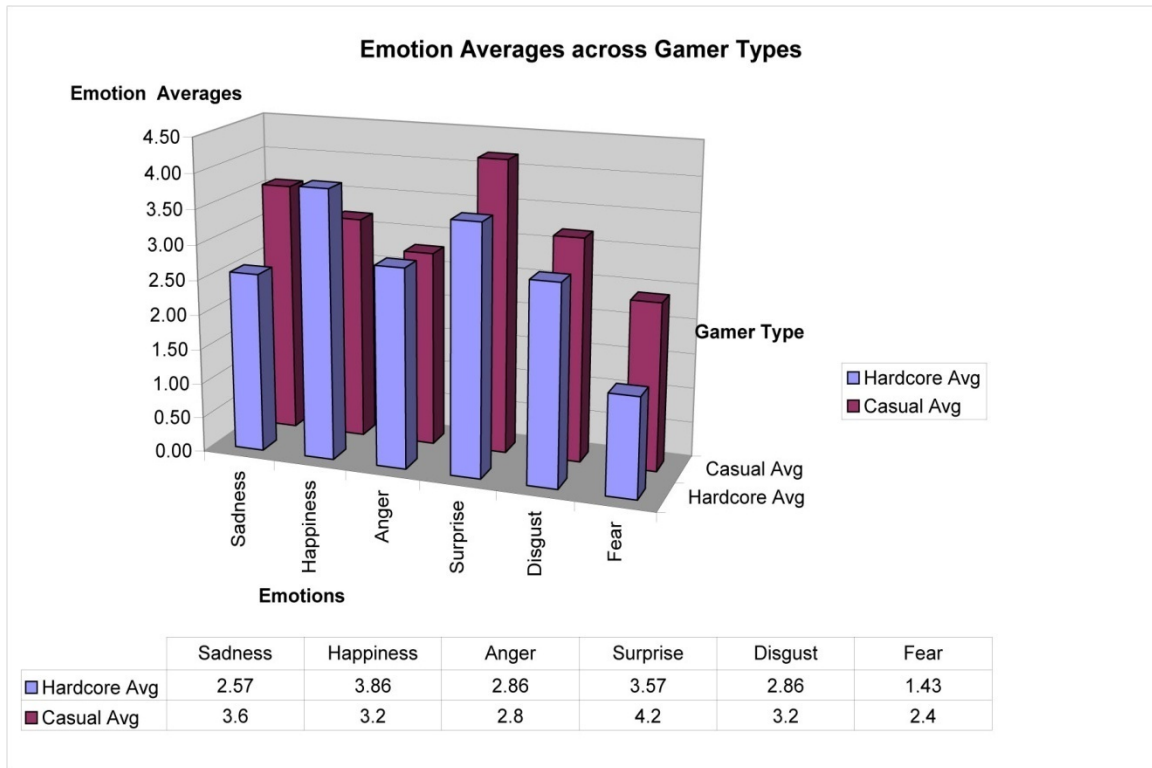
Fig. 32
Frequency of Emotions Across Gamer Types

Melusine Rule Book

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Michelle Menard
Savannah College of Art and Design

STUDIO ARTEMIC

Michelle Menard is currently an MFA candidate at the Savannah College of Art and Design, hoping to finish this project up within the next couple of weeks and to graduate in June. Compounding this are the usual extracurriculars and wedding planning, so it should be a fun ride.

Studio Artemic can be found at http://www.artemic.com, which is currently mostly under reconstruction, with the exception of the portfolio and self-published webcomic subdomains.

(c) 2008
Michelle Menard

Background History

The northern land of Ildamar has long coveted the resource-wealthy lands of Rona, a fellow continent across the Télemaquane Sea. Ildamar's head military statistician, General Tyrk, finally convinces the King to invade their southern neighbors. You are from Melusine, a small island nation caught in between the warring nations, and your country is now the battlefield. Ignoring the war is not an option, so you and your fellow villagers must decide how to act in face of the oncoming peril.

Will you attempt to defend Melusine's sovereign rights, using economic means to battle your enemies? Will you side with one of the conflicting countries, bringing your way into their good graces? Or will you attempt to play all sides from all angles, hoping to come out on top in the end?

The choice is yours.

Piece Count

Melusine includes the following pieces for play:

1 Map scroll board
110 Action Cards
40 Event Cards
40 Quest Cards
360 Resource Cards
1 bag of counters
1 bag of Money Tokens
5 Item Pieces

1 bag of Faction tokens
10 Player Pieces
10 Player Profession Cards
6 Play Mats
8 NPC Pieces
Time Counter
2 Dice

Beginning the Game

Beginning the Game:
Setup of the Board Space:

Unroll the map and place it in the center of the table, arranging the player mats evenly around. Shuffle the Action Cards and Quest Cards together, cutting the deck into multiple piles to place around the table area so that everyone can reach easily. Separate the 40 Event Cards into their four respective color-coded country groups: Red Ildamar, Green Rona, Blue Melusine, White Neutral. Place these off to the side. Place the peg into Year 1 on the Time Board, and the needle onto Spring. Separate the eight Resource Cards into their respective piles, and place them somewhere within easy reach.

One player should elect themselves the Banker, and keep the money and Faction tokens near in easy reach. Another player may elect themselves in charge of the Resource cards as well, to speed play along.

Players choose one of the 10 Professions described in the upper left hand corner of them, taking the starting resources described in the upper left hand corner of the Card. The youngest player goes first, with play continuing clockwise. Each player draws 7 Cards from the deck for his hand, discarding any which are play immediately and replacing them with another Card.

NPC Placement:

The NPC's (Non Player Character) pieces may be placed anywhere on the board within their countries. Tyrk and Galena somewhere in Ildamar. Manning somewhere on Rona, Klein somewhere in the ocean near Rona, and The Mayor and Balhir on Melusine. The two neutral NPCs, Childe and Renair are placed as follows: Childe somewhere on Melusine, and Renair in Dead Man's Reef. A sample placement is given below, but the players may fight about exact placement if they so wish. Check marks mark NPCs.

The Rules

Play Breakdown:

Play occurs over rounds, where each round equals one Season, with 4 Seasons to a year. The Time Counter will help keep track of which year and Season it is. Each player's turn is divided into the following phases:

1. Draw your resources for the turn.
2. Pay any upkeeps for quests, if required.
3. Roll the dice to determine mvmt and if you get caught in an ambush.
4. Free any mvt, trade, activate, complete quests, any actions.
5. Turn end.

During Phase 4, a player has the options of doing anything they like within the rule set—they may trade resources, quests, cards or favors, move their piece, complete quests and gather rewards or any other option they like.

Once each player finishes a turn, the next round and season begins. Some actions can only be accomplished during certain seasons, so keep track of what time of 'year' it is on Melusine.

At the end of a year, all of the Faction Tokens across all players are totaled up, and the country with the most Faction 'wins' the battle for that year. The 3 players with the highest Faction for their country may move both of their respective NPCs to any spots they wish on the board. An Event Card is then played. See Event Cards for more information.

Faction Points:

Faction Points serves as the main method of keeping 'score' in Melusine. Each Point is represented by one token; there are separate ones for each country Red Ildamar, Green, Rona, Blue, Melusine. Acquiring Faction Points are ultimately how a player wins the game, which can be accomplished through trade, completing Quests, stealing, or by playing Action Cards.

Sample Melusine Faction Token.

The Rules

Trading with Other Players:

Players may opt to trade amongst themselves. To do so, during Phase 4, any player may trade with the player whose turn it currently is. Tradable items include resource cards, Quest Cards, Action Cards, Faction Points, promises, bribes, or anything the player can think up.

Trading with the Bank:

A player may also trade with the Bank, and may find this a useful alternative to dealing with halking players. The player may only trade with the Bank when it is his turn, and if his player piece is located on a town, i.e., on a Capital City or Supply Depot. Each country has it's own price list for each resource, making it possible for savvy players to make a killing in the trading market between countries.

To trade with a country's Bank, the player MUST have either moved of that country's faction than any other, or it must be tied for the most. A player can still however enter a town even if they do not have that country's faction. Example:

Billy has 3 Melusine and 3 Rona Faction, so he can trade with Melusine or Rona on his turns. However, Susy steals one of Billy's Rona Faction Tokens, making him have one more Melusine Faction Token now. Although he can still go into Rona towns, he no longer can trade there until he gets another Rona Faction. He may not trade with Ildamar unless he gets 3 of those as well.

Sovereigns, the currency of the realm come in 3 denominations. Brass equal 1, Silver equal 5, and Gold equal 10. Players may exchange their sovereigns for different denominations at any time.

Movement:

At the beginning of their turn, the player rolls both dice to determine their movement rate for the turn. The pictured pips on the dice both count as a "1". The player adds up the two dice and this is their movement for the turn—they may move any amount in any direction *up to* this number, horizontally or vertically. Any modifiers they may have from items or skills are added in as well.
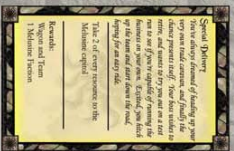
Action Cards:

Action Cards are cards in which a player may activate a specific thing to happen, whether it be to himself or another player. Action Cards may be played at anytime to any player during any turn, unless the Card otherwise specifies. Action Cards have random effects, some beneficial to one or more players, others horribly destructive in their power and effect.

The Rules

Quests:

Quest Cards are more rare than Active Cards, and can be identified by the "Reward" section at the bottom of the card and by their gold border. Quests are narrative aspects of the world, and are offered by the countries and NPC's (Non-player characters) on the board. The top part of the card is a brief story explaining the meaning and reasoning of the Quest, followed by what is actually required of the player, ending with the Rewards. Some Quests can only be completed with players working together in tandem, and these need to be set up in advance to completion. Rewards for these are split between the two players however they wish. To activate a Quest, the player must play the Quest card down on their play mat during their turn, making it the Active Quest. A player may only have one Active Quest at a time. If he so wishes, he may discard the Active Quest and play a different one, however, this card goes directly to the discard pile and not to his hand. When a Quest is completed, it is removed from the mat, the rewards given, and the card placed in the discard pile.

When a player successfully completes a Quest, they may draw a card.

Sample Action and Quest Cards

Event Cards:

Event Cards tell the story of the larger world around the player and explain the major events which occurred that year. These events are important in that they can often affect the rules for the following year, having both beneficial and adverse affects for the players. At the end of the year, all the Faction Points are totaled up, and the country with the most Faction wins for that year. An Event Card is drawn from the corresponding country's pile, and the directions followed. This card remains face-up for the remainder of the year and it's abilities in affect until a new Event Card is drawn the following year.

Stealing:

Players may steal from other players, either with an Action Card or by landing on the same space on the map as an opposing player. If this occurs, the current turn's player may steal any *one* thing from the other player—A Faction Token, Resource Card, Active Quest, Item, a counter, or a random card from that player's hand.

The Rules

Diplomacy, Bribing, and Interaction in General with your Fellow Players:

In order to get ahead in life, it's generally a good idea to make some alliances and truces with other people, and the same is true for the people of Melusine. While there are no written rules for bribing, trading of favors, or alliances, these sorts of behaviors are encouraged.

Ambushes, Skirmishes, and the NPCs:

Melusine has become a bloody battlefield, and the people of the island nation often find themselves caught unawares in the middle of it. On the two dice, the one pip have been replaced with pictorial representations—these dice numbers, the ones, are special. If a player roles one "1" during his movement roll, he is said to have been "ambushed" by a wandering band of soldiers. Rolling two "1's", or snake eyes, the player is instead "skirmished", and finds himself caught between two clashing armies.

If a player is ambushed, they must discard one card from their hand to the discard pile. If a player is skirmished, he must discard his entire hand down to seven.

Players however may under certain circumstances use their connections with their chose alliances to save themselves from these occurrences. The country with the most faction in the player's possession is said to be their current alliance. If a player has a complete tie between all three countries faction, or none at all, the player is said to be neutral. If the player's board piece is on the same area of the map as an NPC of their current supporting faction or alliance, then that NPC can help them avoid the approaching battle. Example:

Billy has rolled one "1" and currently has more Melusine Faction than any other country, so he is currently allied with Melusine. He happens to roll this "1" while standing on the Melusine Island where Balbur, a Melusine Agent, is stationed. Since there in an allied NPC on the same area, the "1" is nullified and Balbur comes to his rescue. Billy does not need to discard a Card.

The next round, Billy rolls two "1s", a skirmish. However, he is still on Melusine island and both Melusine NPCs are currently stationed there. Since there are two, both "1"s are nullified and Billy does not to discard most of his hand.

The next turn, Susy continues the bad luck rolling streak and also rolls double "1"s. She however is currently in the middle of the ocean and supports Ildamar, where there are no NPCs currently. She must discard down to 7 cards.

The four main areas are: The ocean (dark blue on the map), Melusine Island Chain, Rona, and Ildamar.

Special Board Spots:

Besides these four main areas, there are also special spots on the board the players can land on. Towns and outposts are two such places, and are discussed more in full in the Trade section previous. There are also Message Boards and Message Buoys the player may land on—public access boards where criers post details for jobs and help. If the player lands on one of these spots, they may draw a card from the Deck.

Picture of message board / buoy

Picture of town graphic

There are also other special spots, such as Dead Man's Reef, where some Quests ask the player to venture too. These are clearly labeled on the board.

Special Items:

There exist 5 special items in the world which players may come across in their travels: Jengu's Prow, The Manor House, Loviator's Sword, Wagon and Team, and a Trade Contract. These items have their own cards explaining the special abilities they bestow upon the player.

Jengu's Prow: get +4 mvt over water
Manor House: get +5 coins per turn
Loviator's Sword: You can avoid all Ambushes
Wagon and Team: get +6 mvt if crossing flatland and forest, -2 over mountains or water
Trade Contract: double your resources gained at the beginning of your turn

Player Profession Pieces:

From left to right, back to front, the player pieces are as follows:

The Mercenary, Trader, Blacksmith, Rancher, Cleric
The Farmer, Fisherman, Forester, Inn Wench, Bum

Meet the NPCs:

NPC figurines have plaques labeling their name and allegiance, and their bases are color coded with the usual Melusine, Blue, etc.

Melusine:

The Mayor: Melusine's island mayor. He rules over the incorporated villages and is democratically elected by and from the combined heads of all the villages. His term is 8 years.

Baltur: A grizzled man with a scarred face and shrouded past, Baltur is nonetheless beloved by the Melusine children for his wild stories and feats of night. If Baltur's sword proves to be even half as true as his stories boast, he will be a considerable boon to the Melusine resistance.

Rona:

General Manning: Rona's premier Knight-Captain has recently risen to power after the death of the previous General Manning is as of yet unproven in war, and has big plans for the development of a heavy cavalry unit.

Admiral Klein: An older, proud man, Admiral Klein has served in the country's armada for over 30 years. It was under his tutelage that the Ronan naval power became one of the largest in the known world.

Ildamar:

High-General Tyrk: Ildamar's top ranking military officer, Tyrk's bloodthirsty and vengeful reputation precedes him. It was he who persuaded the Ildamaran King to invade Rona.

Sorceress Galiena: A mysterious woman of the court, Galiena's otherworldly powers have made her a favorite of the King and a deadly enemy. It is rumored that she may have been involved with the assassination of the late Queen.

Neutral:

Renair the Blood: A pirate captain of the seas, Renair has not been spotted of late by the Rona Armada. Rumor has she's biding her time and stockpiling weapons for a later assault.

Captain Childe: Ex-mercenary turned outlaw, Childe heads a group of lawless men, traveling from country to country robbing travelers blind.

Counters: represent items given to players by NPCs, which return to the bank once a quest is completed. Other players may steal these counters to obstruct a quest, but do not keep the counter. These return to the bank as well.

Victory

At the end of three years, a peace treaty is called for and all sides take tally of their losses.

First, players are given a chance after the last player has gone to turn in all their money and resources into Faction. Costs are the same as detailed on each Profession Card, and prices utilize the Bank costs of the player's most Faction. If a player has tied Faction amounts, they may pick ONE Bank to finalize trade with. Players are also free to trade and haggle with each other at this time. Action Cards may not be played.

After this, all Faction Tokens are totaled up as usual at the end of the year, with the country on top being declared the victor. The player then who has the most Faction for the *winning country* is declared the winner. If there is a tie, congrats, you both bribed and fought your way to the top.

Alternate Rules

Rules of course may be changed to fit the player's styles, and House Rules can always be an option and limited only to the player's imagination. Possible House Rules and Rule Changes are:

-Extending or decreasing the number of years before the end of the game.

-Declaring sides at the start of the game, and assigning each person one Faction Point of that side.

-Assign the Professions randomly at the beginning of play.

-Every player rolls the dice. The player with the highest number goes first and picks his Profession. He then chooses the Professions for every other player.

-To speed up early play, players may opt to place random resources across the board, with the person reaching that square first receiving the resource card.

Thesis Background

Included here is a brief abstract of the thesis behind this board game.

From a psychological standpoint, I propose it is possible to create a system using the six universal emotions which could create a universal response to one game, thereby cutting down localization costs and opening up the genre to a larger audience. By designing from an emotion standpoint, it would be possible to create the same level of emotional satisfaction gained from other entertainment media, helping give games a more mass market appeal.

Discussion will follow of psychological studies which have studied the biological formation of emotion, and whether this is such a thing as basic, universal emotions, i.e., ones which anyone in the world, regardless of culture, upbringing, or language recognize and comprehend. One of the critical ideas presented here is concept of the formal object: how emotions and their bodily and mental affects are related. Here the six basic emotions will be detailed and studied, including their characteristic triggers and responses. Studies showing the universal comprehension of some of these responses will also be presented here.

After these "basic emotions" and their tested methods have been detailed, I will extrapolate them to be used in game design itself, showing where using these primal emotions can create an appropriate response which is understandable by all. Areas of application include not only more obvious visual cues such as body and facial animation and lighting, but also in areas such as care and ownership, player morality, or pacing of plot or actions. Each major area of application, such as staging, would receive its own treatment where it would tie together this application with the specific biological/psychological emotional affects.

A tabletop game system utilizing these ideas would then be created and tested upon a diverse player audience, using both written and filmed data gathering to verify the success of the project. This is that table top game.

Endnotes

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[2] Kosak, web, 2004.

[3] From a poll of 20 sophomore students.

[4] Averill, p. 849.

[5] http://www.quotegarden.com/emotions.html

[6] de Sousa, web, 2007.

[7] Darwin, p. 444.

[8] Dixon, p. 295.

[9] Dixon, p. 302.

[10] Dixon, p. 306.

[11] Ginsberg, pp. 38 – 49.

[12] de Sousa, web, 2007.

[13] Bagozzi, "Goal-Directed Emotions", pp 3 – 21.

[14] Averill, pp 850 – 854.

[15] de Sousa, web, 2007.

[16] Kemper, p. 521.

[17] Bagozzi, "Role of Cutlure…", pp. 643 – 669.

[18] Russell, p.459.

[19] Russell, pp. 325 – 330.

[20] Olausson, web, 2007.

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[34] Wierzbicka, pp. 275-6.

[35] Faigin, *The Artist's Guide to Facial Expression.*

[36] John Updike, American writer.

[37] Tidus, Final Fantasy X.

[38] Frank Klepacki, Video Game Music Composer.

[39] George Gershwin, American songwriter/composer.

[40] Alexandra Johnson, Christian Science Monitor (1 Oct 1980)

[41] Kaya, and Epps, 2004.

[42] Edgard Varèse, French composer.

[43] Rollo May, *Source*, p. 91.

[44] Final Fantasy VII.

[45] Virginia Satir, American Psychologist.

[46] Jack Kemp, American Politician.

[47] Chris Chocola, American Politician.

[48] Louis Henri Sullivan, American Architect.

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[55] Russell, p. 328.

[56] http://ps2.ign.com/dor/ps2/678618/images/okami-20060615054832723.html

[57] http://en.wikipedia.org/wiki/Zero_Wing

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