

**CULTURE BOTS:**  
**Implications of cultural**  
**content in computer gaming.**

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## **Abstract**

Computer games have the latent potential to communicate significant issues beyond mere entertainment. My thesis proposes the implications of coupling problems of higher social and cultural value to the conventional design elements of Role-Playing Games. The main objective is to allow the user to gain “first-hand” experience into multiple perspectives on a subject without taking away the usual ‘fun’ elements of a conventional game. The interactive projects offer various levels of character role-playability to its users. With the ability to see through some one else’s eyes, the users are instigated to empathize with the characters’ feeling, emotions and point of views - therein lies a threshold to heightened socio-cultural learning and richer value-based gaming experiences.



## Motivations

### Bitten by the bug

Almost 12 years ago, when I was still in middle school, my friends and I used to sneak into the computer labs. We weren't actually allowed in the labs during the after hours of the school, but we would always work out ingenious ways to sneak in. There was no stopping us, especially, when one of us had gotten their hands on a new multiplayer game called Double Dragon. We loaded it up. It took a while to load considering we only had access to DOS-based monochrome PC XTs. Meanwhile, we bickered about whose turn it was to play.

Those were the days of non-GUI operating systems. There were no mice, and networking and such were far fetched, so two of us had to take turns sharing the same keyboard and monitor to play the multiplayer game. Double Dragon was not the first computer game I had ever played, but there was something about the game that caught on to me like

locusts on fresh crops! It was perhaps its multiplayer capability, or maybe it was the anarchistic street-fighting nature of the game, or the both put together- two of us tag-teaming against all odds in a one-to-many fist fighting combat.

As I recall, we spent all evening playing the game, collaborating and strategizing our every move on the computer, so engrossed in playing we didn't even realize it was time to go home until we were literally thrown out by the security guards. Once we entered that lab, we were no longer the decent school-going kids that everybody knew us as. We had transformed into mean street fighters. We had altercations with the bad guys, stole their stuff, instigated street fights and vandalized – we did everything we were not allowed to do in real life.





## The Parallels

Until late 1991 cable satellite channel had not dawned upon main stream Indian television. As a child all I got to see on TV were televised serials of Ramayan and Mahabarath, the two grand epics of Hindu mythology filled with gods and demons, battles and shrewd warfare, intrigue and high adventure. Each episode spun tales of courage and compassion, treachery and terror, heart wrenching moral dilemmas and moments of high exhilaration. The stories portrayed an interesting gamut of characters like any role-playing computer game would these days– the wise old general, the naïve young king, the evil vizier, the king's tyrannical mother, his brave older sister, his bitter younger brother, and so on. The aspects of magical Indian folklore can be much likened to that of Disney adventures, relished by both young and old. The only difference is that Hindu mythology is deeply rooted in its culture and religion.

Several stories had been abstracted from these epics to be taught at school, for the epics mirrored our culture in many ways. Learning the epics meant learning our culture. Computer games put an interactive spin on much the same fantasy adventure experience an ancient epic has to offer.

My culture, education, and personal experiences have, in some way or the other, had parallels with aspects of computer games. Probably, it's my passion for games that helps me to see it that way. However, my key fascination with regard to computer games is the experience of donning the role of another person or character as the narrative unfolds. I am inspired by the amount of intrigue a simple interactive situation can create when coupled with a compelling narrative. A desire to explore these areas and a life-long fascination for computer games has led me to this

very satisfying thesis exploration.

## Introduction

Since its first inception in 1952, computer games have come a long way from sprite based monochrome 8-bit graphics to real time 3D rendering, surround sound and multimedia-rich experiences. However, the fundamental appeal of computer games is still unchanged over the years. Gamers are treated to the same commercial modules of amusement or cathartic experiences that they were used to playing in years past. With very few successful precedents, of which most of them are training simulators, computer games are now yearning for a more serious representation. Computer game designer and author of the book *The Art of Computer*

Game Design makes this interesting analogy:

*Computer games are much like candy, comic books, and cartoons. All four activities provide intense or exaggerated experiences. Whether they use sugar, exclamation points, or animated explosions, the goal is the same: to provide extreme experiences. Children appreciate these activities because their novelty value is still strong. Adults, jaded by years of experience with such things, prefer diversions with greater subtlety and depth. We thus have the panoply of culinary achievement, the vast array of literature, and the universe of movies as the adult counterparts to candy, comic books, and cartoons. Yet, we have no adult counterpart to computer games. This deficit is pregnant with possibilities, for it suggests a momentous upheaval in computer game design.*

Computer games have the latent potential to

communicate significant issues beyond mere entertainment. My thesis proposes an interactive case study that explores the higher social and cultural value.

My process investigates the implications of coupling a unique cultural content to the conventional design elements of role-playing games. The users are presented with a linear narrative, and several interactive pre-contrived challenges that facilitate role-play, user participation, and different points of views. The main objective is to allow the user to role-play each of the characters of the story and learn that character's perspective on the subject without impeding the entertainment value of a conventional game-play. The project is designed to reflect unbiased interpretations and, at the same time, suppress the authors take on the subject as much as possible.

I seek to achieve as consequence: A wholesome experience of the cultural content, a heightened awareness, and a complete comprehension of the multiple perspectives of the pertinent subject matter. Games that impart substantial and value-based experiences. Higher learning through heighten capacity to role-play.



## **CHAPTER 1**

# **History & Vocabulary**



## History

This thesis inquiry investigates the techniques in harnessing existing game technologies (not something new invented for this purpose) in social and cultural learning narratives. The bulk of my research process went into learning the history and the art of computer game design. I began my research searching for precedents, looking back in computer game history and analyzing each significant milestone. I began to clearly outline what a game is in essence and how and why people played games. Certain other significant questions rose from this inquiry: What is missing in conventional games? What can make gaming experience richer? What are role-playing games? How much of ones emotion is invested in playing a role chosen?

The following is a brief time-line of the major milestone in the history of computer games.

History of Computer Games: Time-Line

1952

A. S. Douglas creates the first documented computer game, Noughts and Crosses, as part of his doctoral dissertation. This tic-tac-toe game runs on a big Cambridge University computer called the Electronic Delay Storage Automatic Calculator.

1958

Engineer William A. Higginbotham - who previously helped build the first atom bomb - is the first American to invent an interactive computer game. Tennis for Two is invented at the Brookhaven National Laboratory in Upton, New York to entertain visitors at the lab's annual open house.

(will be abstracted in the form of a graphical

timeline)

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2003

MAJOR MILESTONE OF 2003

Washington State becomes the first state in America to sign legislation prohibiting video game vendors from selling or renting "cop-killer" video games to minors. According to the law, violators can be fined up to \$500.



## What is a game?

If we desire to learn about computer games it is imperative that we first define the core aspects of any or all games. In this chapter I will determine the fundamental characteristics of all games and propose a set of attributes that are inherent in most games.

A game is, in essence, a set of rules constructed for a player's amusement or pastime. A player seeks to achieve a certain goal or objective counter-reacting to the obstacles posed by the set of rules. The number of players engaged with it can vary. It can be as few as one, as in Solitaire, or as many as thousands, as in a Massive Multiplayer Online Role-Playing Game (MMORPG). Irrespective to the number of players, the most functional part of any game are the set of rules, without which a game ceases to exist. The players assume a tacit contract to abide by the rules; in a computer game the same rules are enforced.

In this essay when I say computer game, I mean, any of the following 5 different types computers: Expensive dedicated machines for the arcades ('coin-op' machines), Inexpensive dedicated machines ('hand-helds'), Home Game consoles (Microsoft Xbox, Sony Playstation 2, Sega Dreamcast, and the Nintendo GameCube.), Personal Computers (IBM, Mac) and large main-frame computers. In most cases the computer acts as a referee and is also capable of generating virtual opponents, animated graphics and sound effects, keeping account of player performance (wins, losses, score, frags, lives)

Now that we have defined what we mean by the word 'game' it brings us to the next question- what are the elements common to all game? I perceive the following three factors: representation, interaction and conflict.

## Representation

The rules of the games in most ways represent real-world situations. Games are a sampling of reality. The representation can be very abstract or extremely hyper-real. Take for



instance, in a game like Snake(a.k.a nibbles), a thin long rectangular shape is represented as the snake, and little square blocks are its food. On consumption of the 'food' the snake grows(becomes longer). The objective of the game is to acquire the skill to sustain the snake within the confines of the compact screen area. Here, all the visual elements are abstract and suggestive. Conversely, in a game like Grand Theft Auto, things are very accurate in the representation of reality. The



world seems to extend beyond the birds eye window of the game play. The game makes it appear as though 'life' continues in various towns even when the player is not present. The omnipresence of law-keepers and public service authorities bring the player even closer to reality. If one is found breaking the law, the police hunt him down immediately and put him in prison where he is stripped off of his arms and slapped with a hefty fine. If a player starts a fire, the fire brigade would swarm to the scene to put it out.

The representation has two mutually exclusive sides – objective and subjective. The subjective reality originates from and feeds on objective reality. Games are objectively unreal for it does not physically re-create the situations that they represent. Yet, they are subjectively real to the player. Janet Murray in *The Future of Narrative in Cyberspace* informs

us that "We do not suspend disbelief so much as we actually create belief". Because of our volition to experience the game, "We focus our attention on the enveloping world and use our intelligence to reinforce rather than to question the reality of the experience." Human fantasy plays a pivotal role in any game situation. Brenda Laurel points to us, "The human is an indispensable ingredient of the representation. Since it is only through a person's actions that all dimensions of the representations can be manifest"

## Interaction

We have just learnt that games are representations of reality. So are other mediums. A photograph is a snapshot of reality, frozen in time. Some mediums are more dynamic in representation than others. Movies, animation, music represent the changing aspect of reality. This then begs the question: how are games different?

The most fascinating thing about reality is not that it changes, instead how it changes, the intricate web work of cause and effect by which all things are tied together. One way to represent this web work is to allow the audience to explore and generate their own causes and observe its effects.

Game designer creates a complex cause and effect network of paths, cunningly crafted to show the player all possible facets of a single challenge. The game player is encouraged to

explore all the alternatives, contrapositions and inversions. Unlike in a story, where the audience must infer casual relationships from a single sequence of events, a game presents a branching tree of sequences and allows the player to create his own story by making choices at each branch point. The game player is free to explore the casual relationships from various different angles. A story is meant to be experienced once; its representational value decreases with subsequent retellings because it presents no new information. A game's representational value increases with each playing until the player has explored a representative subset of all of the branches in the game net.

The following is an accounting of a teenaged game-tester at Cecropia, a Massachusetts based computer gaming company who are currently testing a new genre of game known

as the 'filmgame': "The game controls are very simple. It's just a knob, figuring it out was no big deal. I won the challenge in just 2 attempts. I spent the rest of my time trying out all the interesting ways to loose!"



Interaction injects social or interpersonal elements into the challenges of games. It fosters elements of teamwork, deception and co-operation.

Image: The Act

## Conflict

Another element that is very common to all games is conflict. The game presents the game-player with obstacles that prevent him from easily achieving his goal. If the obstacles are generated by an intelligent agent (co-player opponent or AI code) actively block the players attempt to reach the goal, conflict between the player and the agent is inevitable. Thus, conflict arises naturally from the interaction in a game.

The satisfaction of mastery as told by Greg Costikyan in Story Vs

Game, is most certainly enhanced by beating the odds. Therefore, conflict in games tend to be (but not necessarily always) accentuated to its most direct and intense form – violence. Attempts have been made to design games

with minimal conflict. Such games emphasize co-operative efforts rather than conflict. They have not been successful commercially; this suggests that few people enjoy them.



Grim Fandango is a member of a rather distinct genre of games: the LucasArts Adventure game. The philosophy of their games is slightly different than most other adventure

games: they are meant, more than anything else, to be fun, encouraging exploration and innovative solutions to puzzles. Death, most importantly, is almost impossible. The games are not meant to whack the player over the head every time he or she makes a mistake. There is not as much pressure, as in other adventure games, to compulsively 'save' in case the character dies. While, Max Payne is the straightforward shooter game: the player must kill all enemies in order for the

narrative to proceed and for the clues to fall into place. Both games are fundamentally concerned with solving a mystery, resolving crimes, and beating the bad guys, but they manifest different forms of conflict based on their game genre. The game's conflict is based on violence—anything preventing Max from

resolving the mystery must be destroyed. Grim Fandango, however, approaches conflict more subtly and intellectually. It does not de-



mand temporal immediacy and quick reflexes. Instead, the player must find indirect solutions to more complex puzzles.

Conflict is an intrinsic element of all games. It can be direct or indirect, violent or nonviolent, but it is always present in games.

## Safety

Another quality of games that most game critiques talk about is –‘Safety’. With the understanding that all gamers and non-gamers alike, will acknowledge that games are safe way to enjoy the thrills of reality. I choose not to analyze this term and thus conclude this chapter with a quote from my co-worker:

***“I have never stolen a police car, surfed a tidal wave, flown a TIE fighter or built an amusement park in real life, but thoroughly enjoys these activities inside the universe of games.”***

- Joe Calabresi, Art director, Cecropia Inc., Lexington . MA



## Why do people play games?

Up until now, for the most part, I have emphasized the characteristics intrinsic to games themselves rather than the motivations of the players. In this chapter I will analyze certain important human traits that persuade the game-player to play the game.

From a game-designer's point of view, game-play requires two major components: game and the player. In pursuit, his immediate preoccupation is with the game itself but eventually his final goal is to humor the game player. Therefore, the human player is the primary concern of the game designer. Why do people play games? What motivates them? What makes games fun? The answer to these questions is crucial to good game design.

### Education

Game-play is not a human invention; it is an instinct that can be observed among most mammals and birds. As suggested by Robert Fagen, in "Animal Play Behaviors", animals learn the skills of hunting and survival through playing 'games' in their 'cubhood'. Anyone who has paid a visit to a zoo and watched young lion cubs at their play would notice in their behavior, all the fundamental game attributes that I described earlier - inter-



lion cubs

action, conflict and safety. The cubs wrestle, growl, claw and bite one another. One of the cubs would wander off and notice a butterfly. It would crouch on the grass, creep ever so slowly toward its insect prey, then raise its hunches, wiggle them and pounce. They are, in fact, learning how to approach their prey without being seen, how to pounce, and how to grapple with and dispatch the prey without being injured. They are leaning by doing, but in a safe way.

Games are thus a time-honored vehicle of education. The fundamental motivation consciously or otherwise, is indeed to educate oneself.

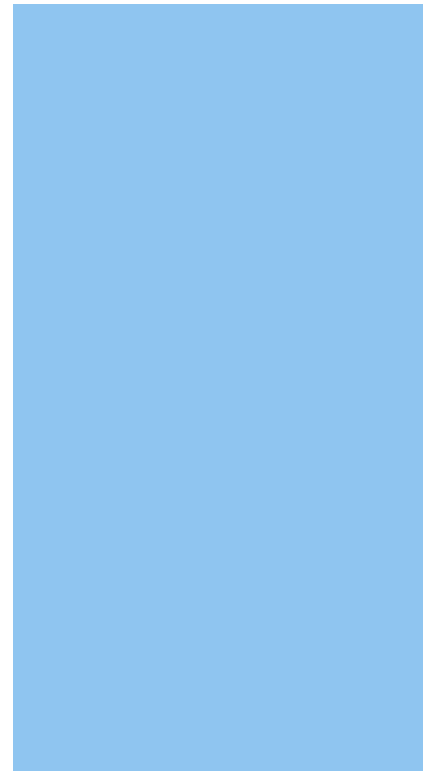
## **Fantasy/ Exploration**

One of the most important motivations of a game player is fantasy fulfillment. Books, movies, music and games are different modes of escape- escape from the harshness of reality. Games are in a certain way superior to the rest of the passive mediums (movies, books) because they are participatory. The game player is not just a bystander, audience or a reader; he is a part of the game. The game player is an active component of the game. Indeed, the player drives the game, controls it in a way that is impossible with other passive fantasies.

Fantasy takes a form of symbolic exploration. Games, like many art forms attempts to transport the audience into a different world of unthought-of unheard-of experiences. Consider for example, Dungeons and Dragons(D&D) created by Gary Gygax with Dungeons and

Dragons, a complex non-computer game of exploration, cooperation, and conflict set in a fairytale world of castles, dragons, sorcerers, and dwarves. In D&D, a group of players under the guidance of a “dungeon master” sets out to gather treasure. The game is played with a minimum of hardware; players gather around a table and use little more than a pad of paper. The dungeon master applies the rules of the game structure and referees the game. The dungeon master has authority to adjudicate all events; this allows very complex systems to be created without the frustrations of complex rules. The atmosphere is quite loose and informal.

Fantasy is undeniably an important component of human play. It is critical to the creation of all forms of art and design.



## Social Lubrication

In ancient India, after a long days work at the paddy field, men would squat around a banyan tree and play board games. The 'board' would typically consist of squares inscribed on a piece of level ground. Stones of different sizes would be the pawns. While two players are engaged in the game the others would gather around instructing and cheering the player they chose to support. This fun, socially injunctive game is now one of the most famous board games of the world - chess. The game itself is minor importance to the players; its real significance is its function as a focus around which an evening of socializing will be built.

Computer games unlike board and card games are very solitary in nature. This solitariness of gaming experience is a source of worry—many contemporary critics fear that it isolates its players and reduces their social



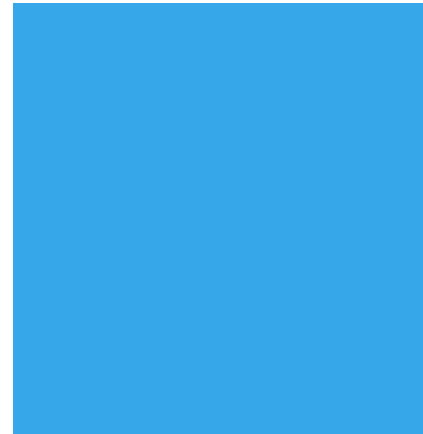
skills. The counterargument is that online gaming actually supports person-to-person interaction, albeit indirectly. Thousands of players from all over the world can get together and interact online in a MMORPG. Then again, offline gamers set up 'LAN parties'- a very common Friday evening activity among IT professionals. Co-workers set up multi-player games like Quake III , StarCraft or Unreal Tournament via the Local Area Net-

work (hence, the jargon, LAN party) in their office. The players can organize themselves into clans; each clan dresses its avatars in the same colors and its members fight together against other clans. "We set up LAN parties at least once every month. Our boss joins in too. It's so much fun, he orders in beer and pizza for everyone. We play Quake III arena from 2pm till almost 7pm. You know, I am pretty certain that my boss thinks I am smart for I always out-fragg\* him!" says Ronald John a 23 year old programmer from Bangalore, India.

There is a wide array of games like Dance Dance Revolution(DDR), Antigrav, Karaoke whose game-play invites the players to sing along or dance.

Different games have different ways to socially engage its players - virtually or otherwise. Games in general are social lubricants.

\* Fragg: Originally coined within the first person shooter game 'Quake', to 'fragg' is to kill an opponent in a game



& MMORPG

## Need For Acknowledgment

As we discussed earlier, one of the key attributes of games is response to stimuli. A good game in general is designed to acknowledge the game-players every move. Most players, including me, find it annoying to play certain adventure games which typically require you to run around finding hidden treasures. It is fascinating to move about in an enchanted virtual environment but the intrigue will lag in time if sufficient interactive agents do not engage the player.

Crawford in his analysis likens games to domestic pets. "Why on earth do we keep in our homes animals that require food, veterinary attention, and sanitary maintenance? Because they acknowledge us. We can interact with pets; we talk to them, play with them, and emote with them. A dog is an especially

responsive creature; it can read our facial expressions and interpret our tone of voice.

A smile will trigger tail-wagging; a kind word will precipitate jumping, licking, barking, or some other expression of affection. Goldfish, by contrast, neither appreciate nor express emotion. Thus, even though goldfish are much easier to care for, most people prefer dogs as pets. People value acknowledgment enough to expend the effort to obtain it."

A well designed game acknowledges the game players presence, his actions and even his personalities.



Image: Dog

People's motivations to play games are very complex, it is almost impossible and beyond the scope of this thesis to examine every single aspect in detail. Yet, we must realize its importance for they are vital to answering certain important queries of this thesis exploration: How can we best serve the needs of the game-player? How can we use games as a communication tool?





## **CHAPTER 2**

# **Research & Experiments**



## **The Consequences**

Social consequences of computer games is a hotly contested subject among pop psychologists who believe that game may affect people in lasting and harmful ways. As we learnt earlier, conflict is an integral part of games and therefore games normally tend to be violent in nature. The recent popularity of violent video games has accentuated the concerns of many.

### **Games and Violence**

A large body of related media research suggests that exposure to media violence contributes to a general desensitization to real-life violence, as well as to an increased likelihood of aggression.<sup>1</sup> Some parents and teachers blame school shootings and other aggressive behavior on violent video games.

"If you've ever watched young children watching kickboxing," says child psychologist John Murray, "within a few minutes they start popping up and pushing and shoving and imitating the actions." Murray researches at Kansas State University in Manhattan, Kansas. There are evidences to the claim that people become less sensitive to violence over time. Says Murray "You get so used to seeing it that you eventually think it's not such a big deal. Then there's the 'mean world syndrome'. If you watch lots of violence, you may start to think the world is a bad place."

John Murray, in his most recent study, eight boys and girls between the ages of 8 and 12 were asked to watch a series of video clips. Some clips showed violent fighting scenes of Sylvester Stallone from the movie Rocky IV. Other clips were full of action, but no violence. Others were just blank screens. During the experiment, each kid lay inside a special brain-imaging machine. Such a machine takes pictures of the brain and shows which parts of the brain are working at different times. Murray and his colleagues found that exposure to violent video clips activated the amygdala, a thumbnail-sized area in the brain. The right side was found to be particularly active.

The colored parts of these images—each one a cross section of a brain—show which parts of the brain are active when children view a violent video clip but not when they view a nonviolent clip.



John Murray, Kansas State University

The amygdala is best known as the “fight or flight” organ. It senses danger and prepares one to either fight back or flee. The breathing is observed to slow down. One becomes hyper-aware of movements in the environment and the blood rushes to the core of his brain. “If someone drops a snake in front of you, most people . . . gasp,” Murray says. “That’s actually the amygdala responding.”

Image: brain reserch

## Other Negative Effects

It has been proposed that some children may be exceptionally vulnerable to negative influence from playing video games. This group has been called “high risk” players.<sup>3</sup> High risk players may be individuals who are drawn to video games because of preexisting adjustment problems. Game-playing may then have a causal role in either perpetuating preexisting problems or in contributing to the development of new problems. For example, some children with academic problems may use video games as either an escape from schoolwork or as an area in which they can excel. Although there could be temporary benefit such as an increase in self-esteem, over the long term academic problems may worsen because of this strategy, leading to a decrease in self-esteem.

Contrary to the popular beliefs, I stand by the counterargument that it is baseless to say

violence in games has anything to do with real-life violence. Movies, television and books have always had the same amount of violent content. The only difference is that games are interactive and participatory. The game industry has, overnight, become a multi-billion dollar success and therefore, is quiet seemingly the obvious scapegoat. James Gee, an education professor at the University of Wisconsin, Madison, says “You get a group of teenage boys who shoot up a school—of course they’ve played video games. Everyone does. It’s like blaming food because we have obese people.”

That is not to say, that violence in games are desirable and totally harmless. Measures must be taken to ensure that games reach the right demographic. Vulnerable children must be protected at all costs, because their moral scaffolding is a work in progress, younger

children are more susceptible to negative impact from violent video games than older children. Establishment of ESRB (Entertainment Software Rating Board), to provide rating and information about game content, is certainly a good sign.



Every media has the potential to be mis-used. It is in the hands of the artist, writer or designer to help curb negative consequences of immoral media usage.

In the wide landscape of computer games, not all are devoid of positive feedbacks. In fact, games are pregnant with beneficial

possibilities that are yet to be exploited. This thesis and its projects have mainly leveraged upon these potentials.

James Gee, in his book titled *What Video Games Have to Teach Us About Learning and Literacy*, chalks out several ways in which computer games have helped inspire education and learning. Gee points to us that games are 'attention-grabbers': "A good video game is challenging, entertaining, and complicated. It usually takes 50 to 60 hours of intense concentration to finish one. Even kids who can't sit still in school can spend hours trying to solve a video or computer game. Kids diagnosed with ADHD because they can't pay attention will play games for 9 straight hours on the computer. The game focuses attention in a way that school doesn't."

{age of mythology}

Games can inspire new interests. After playing a game called *Age of Mythology*, Gee says,

Image: ESRB ratings

kids (like his 8-year-old son) often start checking out mythology books from the library or join Internet chat groups about mythological characters. History can come alive to a player participating in the game

.  
University of Rochester in New York recently found that video games might help improve visual and organization skills. In the study, frequent game players between the ages of 18 and 23 were better at monitoring what was happening around them than those who didn't play as often or didn't play at all. They could keep track of more objects at a time. And they were faster at picking out objects from a cluttered environment.

The multi-billion game industry continues to benefit from our society's patronage, yet our society has not benefited anything substantial in return. Games can and should foster

educational, social and cultural values. That defiantly is a challenging proposition for every game designer – to create non-superficial entertainment.

## Emotional Games

Many game developers point out that the future of the game is not technological but emotional. Chris Crawford says "when a player blasts hundreds of alien invaders, nobody believes that his recreation directly mirrors the objective world. However, the game may be a very real metaphor for the player's perception of his world. I do not wish to sully my arguments with pop psychological analyses of players giving vent to deep seated aggressions at the arcades. Clearly, though, something more than a simple blasting of alien monsters is going on in the mind of the player"

What is that 'something'? - is probably the obvious question that might arise in a reader's mind. Crawford does not actually answer it. I reckon it being the emotional and interpersonal connotations between the gamer and game. It is very apparent that people feel

emotional and sentimental towards characters, occurrence and objects that are non-real and part of a mere computer game. Why then, would people spend time and money, bidding and buying virtual game objects in e-bay.( the objects are usually virtual magical weapons or game edifices )

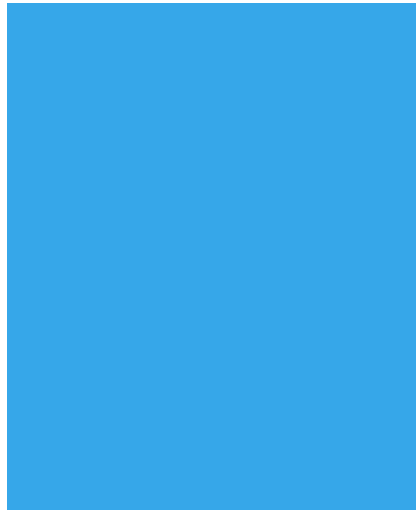


Image: ebay snapshot



Will Wright, creator of Sims says, "It seems to me that games are mirroring the emotional development of humanity in a similar way. The earliest games appealed primarily to our more primitive instincts. These instincts originate in the central portion of our brain, our so-called 'reptilian' brain stem. Over time, the emotional palette of games has broadened beyond instinctive issues of survival and aggressive to include the more subtle mechanisms of empathy, nurturing, and creativity. We still have to go a long way to go, however, to reach the outer cerebral cortex. Compared to other forms of media (books, films, music), games are still stuck somewhere around the 'small rodent' phase."

Games nowadays are inching towards a more developed emotional representation. This is primarily due to the technological development of visual graphics and interactivity

which make the games seem very realistic and compelling. Relating to or empathizing with the characters and occurrences of the game are ever so seamless.

How can one connect so deeply and so empathically with all-virtual agents? What abilities of human beings allow such a transition? I have deduced four important human faculties that would help bring emotional depth in games- immersion, role-play, catharsis/vicariousness and identities. These elements are the very basis of creating games of emotionally rich experiences. To mention but a few, these include taking the player on both an external and internal journey, enticing the player into becoming involved in rich game worlds, allowing the player to explore new identities as well as new ways of feeling and acting, and placing the player in emotionally complex situations.

The following is an accounting of my research, process, experiments performed, and interviews conducted to analyze and understand each of the above mentioned elements.

## **Role- Playing**

Poole reminds us that “On a basic level, nearly every videogame ever made is a role-playing game”. This is an enormous part of the pleasure we derive from games: the opportunity to play a role other than ourselves. In a computer game we are given the opportunity to construct an identity in a consequence-free



Image: role-play sketch

world. Computer gaming has promoted the existence of multiple selves. "To be alive in the twentieth century," Janet Murray tells us, "is to be aware of the alternative possible selves, of alternative possible worlds, and of the limitless intersecting stories of the actual world". The mild-mannered accountant can come home from a long day of work and find his alternate self as a master strategist in a game of Starcraft. The local animal rights activist put in front of the monitor might be a stone-cold killer.



Instead of empathizing with a character, as might occur with a film or novel, the player, extended into the gameworld through the medium's interactive apparatus (i.e. mouse, keyboard, joystick, audio speakers, and screen), constructs a dynamic self, one between the static construction of the game's protagonist and the player's gaming self. It is easy to notice the interesting habit that occurs when a character dies in a computer game: the player doesn't say, "She died," in reference to the character but instead often



Image: starCraft & HitMan2

says, "I died." Says Poole, "In the movie theater, the world is projected at you; in a videogame, you are projected into the world". Much of the pleasure of the computer game, then, derives from the tension between the real and the unreal: separation from reality and the power of the fantasy evoked from concurrently playing spectator and protagonist.

Role-playing is the key ingredient in constructing the suspension of disbelief and in bridging the gap between the real and the unreal. Glen Davis in his essay *Game Noir: The Construction of Virtual Subjectivity in Computer Gaming*, says "The 'existential possibilities' of role-playing are best realized, though, in a game in which the character's personality is not firmly set. This may explain the ubiquity of games in the "role-playing" genre—games whose character-subject, while the protagonist of the narrative does not preclude the

incorporation of parts of the player's identity. The player typically builds up the physical traits of the character by the choices she or he makes, and this investment in the development of the character inspires a significant investment of personality, however dissonant from the actual identity of the player. Players can develop a strong attachment to their role-playing game characters. It is perhaps these games that provide the least anxiety in identification with the character, since much of his or her (or its) personality necessarily stems from the player's imagination."

We find role-playing to be another feature specific to the computer gaming medium. We may empathize with a character's position in the film medium, but the gaming element of control adds a whole new spin to the idea of role-playing. Film promotes subjective identification with the protagonist, but the specta-

tor is never allowed to alter any cinematic events. What is role-playing without being able to at least minimally control a character? At best the film can offer us the experience of looking through a character's eyes with subjective camera work, but can never approach the level of role-playing that even a nominal amount of interactivity can provide.

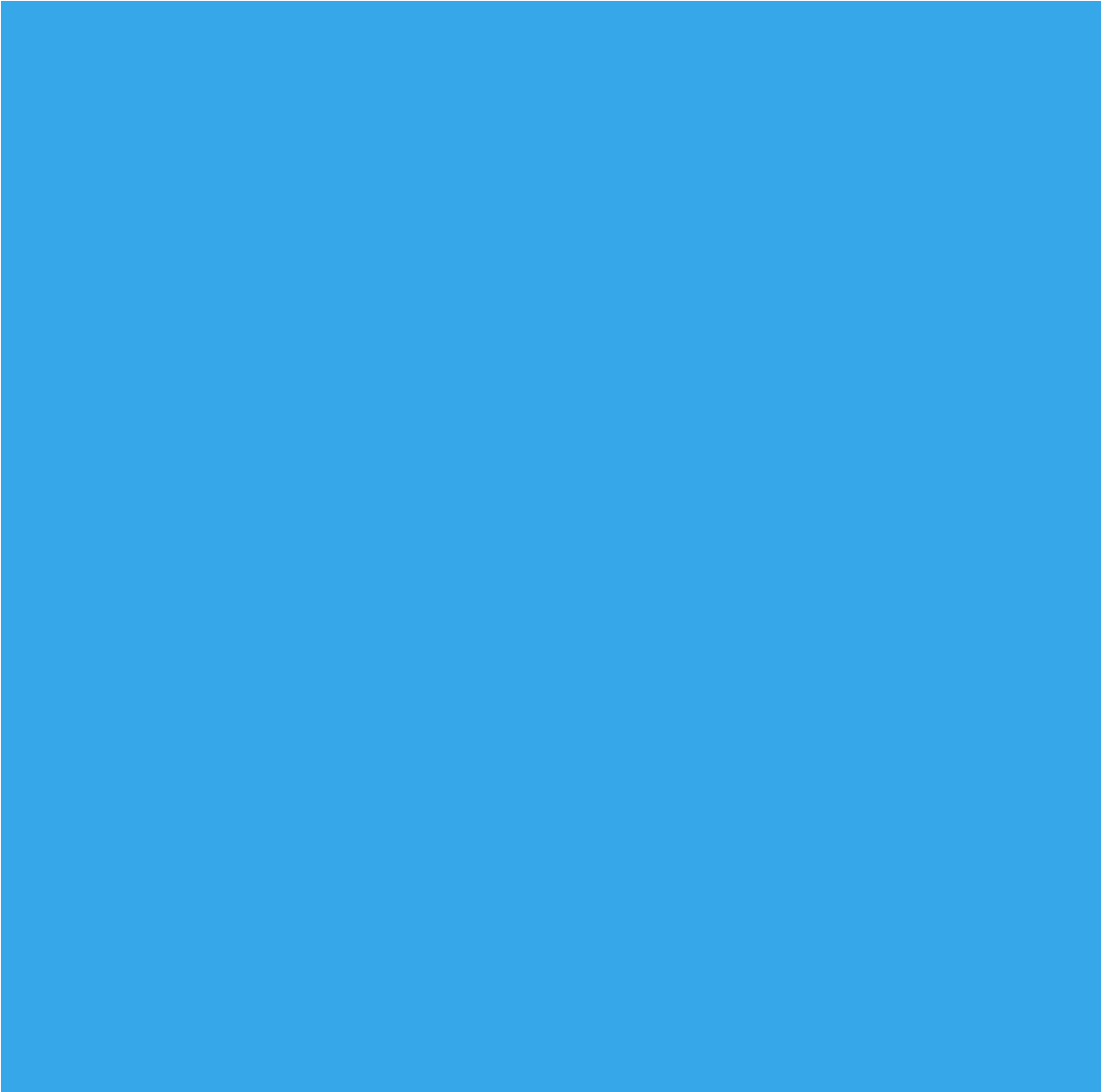


Image: Diablo2

## Immersion

Carcasses of maggots, dismembered arms and legs of minions were strewn all over the place, the stench was unbearable, we had not seen day light in weeks, we knew we had to get out of the place, but then we couldn't leave until we found the Horadic Malus. We had to find it at any cost, the malicious spells of evil demon queen Andariel would have us and our accursed friends at Rouge Encampment perished if the Horadic Malus was not returned to Charsi, the blacksmith, in time. Only she could break the curse.

For months my mercenary and I were on this quest, we had ventured the ghastly Black Marshes, found our way through the Monastery Barracks, and entered the Catacombs slaying the Night Clans. Three sets of stairs led down to 4th level of the Catacombs, where Andariel practiced her sorcery. Just as I began to inch further I leaned over to look at

my compliance. There she was, all beaming, loading her bow with lightening powered arrows, ready to take on any evil minion that seemed to attack me. I was glad she was there with me; she had been the most loyal friend I have had in some time, she did a great job by keeping the enemies at bay while I was too tired from the battle or had to rejuvenate my energy and powers. I remembered how I had won her as a reward from Kashya, the rouge leader back in the encampment, for my successful completion of the quest to free the Burial Grounds from a previous rouge captain named Blood Raven, corrupted by Andariel, was wreaking havoc by raising undead creatures.

I signaled her to follow me, as I stormed down the stairs. I was immediately surrounded by a multitude of enemy attack from all sides - Dark Hunters with hatchets, Hungry Dead

with spears, BishiBosh and Fallen Shamas. I stood there, what seemed to me like hours, slaying one minion after another unaware of my weakening magical powers or Andariel's moves. I stopped suddenly. Where is she when I need her? I turned around and started looking for her, while the enemies kept following me attacking me with arrows and spears. I found her in one corner, cold, green and dead. Andariel had poisoned her. Infuriated by the sight of her dead body, a raving fit of vengeance took over me, I glugged down my energy and stamina portion that I had saved for a time like this, then sought after Andariel with furious anger. I did not care about the little minions annoying me at that time; I wanted to go for the big kill. I found Andariel at the end of the Catacombs, green and ugly, a giant four times my size, hurling poison bombs at me. My body was turning green; I had to move faster before the poison could

take over me completely. I had no choice but to use my War-Havoc skill, I spun around Andariel like a twister I didn't stop until her green blood exploded out of her severed head and limbs.....

I stepped back from the computer screen, breathing heavily. What had just happened to me? I had goose bumps all over my body!

I had just been immersed in completing Act I of Diablo II: Lord of Destruction, a PC game. How do game designers create this sort of heightened immersive game-play? The game industry talks a lot about immersion and suspension of disbelief, but seldom actually tries to define it or to understand how it works.



In *Hamlet on the Holodeck: the Future of Narrative in Cyberspace*, Janet Murray enumerates what she considers to be the four properties of digital environments: digital environments are procedural, participatory, spatial, and encyclopedic. The first two make an environment interactive while the latter two make it immersive.

In my own analysis, I find it very hard to separate the two. In a computer game, passive qualities like spatial representation or database clubbed with active agents like elements of interactivity (participatory, artificial intelligence, control) together form the immersion. Neglecting the subjective association that a spectator develops by means of empathizing with the protagonist or events in a movie, a movie is made up of only passive elements. What fundamentally separate a computer game from a movie are the active agents. The

active agents of a computer game engage the user to be 'immersed' in the game play. Therefore, immersion is a superset of active and passive agents, active agents being the interactive elements and passive agents being the spatial and encyclopedic/database elements.

Consider the following experiments I conducted to study Immersion, role-play and catharsis. Lightheartedly, I call these 'the failed experiments', for I had set out to create a very immersive and engaging experience, the 'a-ha moments', the moments of discovery that would help me wind up this thesis. Instead, this exploration threw me back to square one, compelling me to rethink my narrative and interaction structure, and further extend my research.

## The Failed Experiments

### “Framed”



This experiment was set up to study physical immersive space. A rectangular cabin was constructed with wooden frames in the form of a boxing ring. Two ropes ran all across the inside of the ring, a chair was placed at one corner to mimic the chair used in an actual boxing ring for the boxer to rest between

rounds. The entire cabin was covered with black cloth to make it a completely enclosed space. The inner sides of the cabin had drawing of people that were made to look like a boisterous audience at a boxing bout. The floor consisted of pieces of paper and water bottles that may have been hurled in by



the angry audience, a pair boxing gloves lay beside the chair. One side of the inside wall had a projection of a looping video of the controversial African-American boxer Reuben Carter. The video montage consisted of snapshots of Carter's boxing matches, the trial for murdering 3 people at a bar in New Jersey,

pictures of him behind the bars and angry protesters on the street. A slightly distorted version of 'Hurricane' by Bob Dylan was played as the background music. (Hurricane is a song about the story of Carter and his controversial murder trail)

Image: constuction

The goal of this experiment was to inform the participants about Reuben Carter and his life by immersing them in an enclosed physical immersive space. The intention was also to study 'immersion' and 'immersive-space'. How can one communicate by creating an interesting space or environment? How much of information is necessary to get the point across? How much is 'too-much'?

The experiment was not very successful; people were not as 'immersed' as I had expected them to be. The following are few reasons why quiet as

#1 – Too much information compacted in too little a space.

"It occurred to me immediately that it was a boxing ring, I had to bend and hop over the ropes like in an actual boxing ring- that was interesting. But once I got in, everything around me were screaming Reuben Carter

in my face. The boxing gloves, the video, pictures of Carter behind bars and Bob Dylan's hurricane – Ok, I get it!"

- Jill Lewis

#2 – Self-contradictory

"The inside of the ring looked deserted, yet there seemed to be so much activity going on outside the ring. It didn't seem very logical. Was there any purpose behind that? Its not clear."

- Edward Fuller

#3 – Passive

"No, I didnt feel like I was Reuben Carter. I was just watching stuff, not doing anything that he might have done"

- Joanna

.

### Whack-a-Mole revisited



In this experiment I wanted to isolate 'interaction' and study its effects on the users. My intention was to get the users engaged in a simple task of elimination little animated creatures (bots) that move about randomly on the screen by clicking on them. This flash interactive project consists of two distinct panels. The first one on top is the stage where

the bots appear and roam about. The second panel contains all the controls. The user could use the appropriate value-setter to control the randomness, intelligence, speed, and the number of the bots that appear on the stage. For example, stepping up the value on the intelligence value-setter would make all the

bots very elusive, it would dodge the user trying click on it. Tweaking with the controls, the user could arrive at a value-setting that is interesting for him to play. Clicking on a bot would make a distinctive 'pop' sound as the bot fades away and disappears. Before the game begins the user can also construct a maze. The maze then would appear on the stage where he can observe interesting behaviors of the bots- some get stuck in the narrow opening of the maze walls, others keep circling trapped in a corner.

This experiment failed as well. While it did keep the users immersed in trying different probabilities on the controls, it did not happen for long.

- The code was very buggy. Most users could not tell the difference between randomness and intelligence, the bots seemed to behave the same way. The speed

control was very sensitive; the smallest tweak would send the bots bouncing into each other and outside the screen.

- Bad start.

The users were asked to begin with building the maze. Most of them wondered what it was for and did not quiet get it until the bots appeared.

- Not rewarding

Besides the "pop" sound and the bot fading away, nothing really happened in the game.

There were no points or rewards for the user's action.

- Very repetitive and monotonous.

Each bot is an instance of the same object; therefore, every bot looked and behaved the same way.

The experiments may have failed, but it did give me a better understanding of the elements that I was investigating- active and passive agents of immersion. These experiments also allowed me delve more deeply into studying the immersive nature of computer games. It led me to infer various types of immersion that normally exist and even chalk out a few 'dos and don'ts' of game design in each category.

## **Tactical Immersion**

Tactical immersion is immersion in the moment-by-moment act of playing the game, and is typically found in fast action games. It is what people call being "in the zone" or "in the groove." It is physical and immediate. When the player is tactically immersed in a game, his higher brain functions are largely shut

down and he becomes a pair of eyes directly communicating with your fingers. "It is an almost meditation-like state-the Tetris Trance" says Ernest Adams, in an article he wrote for Gamasutra.

Tactical immersion is produced by challenges simple enough to allow the player to solve them in a fraction of a second. Ask him to think for any longer than that, and we risk destroying the trance. Players who are deeply immersed in the tactics of a game aren't much concerned with its larger strategy (it seldom has any besides survival), and couldn't care less about its story. Sometimes a game has a larger strategy that a player comes to be aware of through repeated playing, and he can change his approach the next time he plays, but for the most part the tactical nature of his immersion remains the same. To create tactical immersion, the designer must offer his players a flawless user interface,

one that responds rapidly, intuitively, reliably. Players will not 'get into the groove' if they are struggling with slow, awkward controls. Tactical immersion is usually destroyed by abrupt changes in the nature of the game-play, a shift in the user interface.

#### Strategic Immersion

{Sim city}

Strategic immersion, on the other hand, is a cerebral kind of involvement with the game. It is about seeking a path to victory, or at least to optimize a situation. The highest, most abstract form of strategic immersion is experienced by chess masters, who concentrate on finding the right move among a vast number of possibilities. When the player is strategically immersed, he is observing, calculating, deducing. However, this does not have to mean that the game is turn-based, nor does it even have to be about conflict. The player who intently studies patterns of traffic in Sim City in order

to decide where to build a new road is strategically immersed in the game.

In order to achieve strategic immersion, a game must offer enjoyable mental challenges. Awkward or illogical game-play destroys strategic immersion. Games with bad path-finding\*, for example, break the player's sense of immersion; because they do not obey orders the way the player thinks they should. Too much randomness tends to destroy strategic immersion as well; if a game is heavily dependent on chance, the player will find it hard to formulate an effective strategy.

Players who are deeply involved in the strategy of the game are seldom that interested in the story. Chess players couldn't care less that the pieces are named for the members of a medieval court; the only thing that matters is where they are and how they move. Deeply strategic players often ignore the story entirely, thinking of it only as a distraction.



## Narrative Immersion



Narrative immersion in games is much the same as it is in books or movies. A player gets immersed in a narrative when he or she starts to care about the characters and wants to know how the story is going to end. The player who is immersed in the narrative can tolerate a certain amount of bad strategic and tactical game-play. Adams reminds us “Few games have stories good enough to excuse really bad play, but people who are hooked

and want to know how it ends will usually overlook, say, a slightly awkward interface or a feeble AI”

“What creates narrative immersion is good storytelling, and what destroys it is bad storytelling: clumsy dialog, stupid characters, and unrealistic plots.”The skills needed to create narrative immersion are quite different from those needed to create strategic and tactical immersion, “which is why smart studios hire

professional writers to create their storylines rather than leaving them to the designers.” says Adams.

The designer should not assume that the players have a strong desire only to beat the challenges of the game. Not all players are motivated by a desire to win for its own sake, some play in order to find out how the story unfolds. Different players prefer different kinds of immersion. A well designed game will attempt to cater to a wide verity of the player demographic.

## IDENTITES: A Documentary

I set out to conduct interviews with people, in order to investigate the last three subjects of my thesis research and inquiry (catharsis, vicariousness and identities). The intention was to have a documentary made that clearly exhibits real life examples of people who don't exhibit different identities in their day to day life style. I am not talking about people who suffer from MPDs, multiple personality disorder- the clinical situation where people are confronted with their 'alters' or their other selves; Instead, the main concern was to document people who willingly assume a role or identity that don't originally belong to them. This inquiry digs deep into their life style and personal experiences with their self-induced other self.

The primary goal of this inquiry was to identify, understand and ascertain the underlying reasons behind people's motivations. What are the key factors that determine their identity?

Can game design benefit from the knowledge of these factors?

Before we delve into the analysis I must first define the scope of certain words. By 'identities' I mean, essential characteristics of ones individuality. 'Vicariousness' is the ability to share someone else's experience through the use of the imagination or sympathetic feelings. 'Role-playing' for the most part means the same, the ability to willingly place oneself in someone else's shoes. 'Catharsis' is the elimination of a complex by bringing it to consciousness and affording it expression.

### **Where do I start?**

I didn't know who to interview or where to start from. As I joke in most of my presentations, I was looking for anybody who could

put the word 'role-playing' in a sentence. I began by putting together in paper two things – a hypothesis and a laundry list of people I needed to interview.

***The Hypothesis:***

- 1. Role-playing is a part of human nature.***
- 2. Role-playable characters/objects/entities need not necessarily exist in real life. It could be a figment of one's imagination.***
- 3. One would role-play for the following reasons***
  - Catharsis***
  - Learning***
  - Vicarious life***
  - Fantasy fulfillment***

People to be interviewed

- Goths (at least one person from the Gothic Community)***

- Fantasy artists***
- Ardent computer game players***
- Pre-teens (specifically game players)***
- Role-player in real-life (some one who temporarily role-plays as part of his career or job - e.g. method actors)***
- at least one scholar in the area of Psychology (to conclude)***

I wanted to perform the interviews in that order. Finding a Goth was not as easy a task. I ran into a lot of 'Punks'; 'Metal-heads' who pretty much dressed up the same way. I certainly did not want to go to a Goth 'hang-out', for the purpose of this interview was not to learn about Gothic culture, instead it was more about learning the motivations of a person who adopts to it. Hoping I would eventually find a Goth, I moved on to the next subject in my list – Fantasy artists. Two names flashed before my eyes immediately, Alex Cockburn

and Bethy Williams.

### **Of Furies and Fantasies**

Alex was a roommate of a friend of mine, Ed, with whom I took Poster Design class. Ed and I used to hang-out at his apartment most of the time discussing poster design or The Beatles. Alex was a quiet guy; I never really interacted with him very much. Only thing I noticed was that anybody who visited Ed and Alex's apartment almost always asked if they could flip through Alex's sketch book.

Alex is a furry artist. I didn't know anything about furry or its existence until I met Alex. I asked if he would do the interview with me and he immediately agreed. I could tell he was overjoyed and tremendously excited - some one thought that his artwork was

worthy enough for a documentary!

During the interview Alex began by explaining what Furry art was. He spoke clearly about complex terms like anthropomorphism, making a conscious effort to support everything he said with relevant examples. He said, "Furry art is a concept that deals with animals and



Image: alex

human beings. Furry artists are people who like to draw animals performing human activities, like walking, eating from plates with forks and spoons etc. The artist basically instills human or human-like qualities onto animals. This is not a new concept; it dates back in time to the Egyptian era, probably even earlier."

The conversation spanned from ancient Egyptian art to modern-day Disney animated features like Lion King, Hindu gods and goddesses to Yiff- a pornographic subculture of furry art. Things got very interesting when he began to prove my 2nd and 3rd hypothesis.

He revealed, "There are some people who dress up like the (furry) characters, they feel, they are in touch with. I for one don't dress like my furry characters, but I do emotionally identify myself with them. There are two characters that I draw myself as – 'Pussy Cat', the

feline and 'White Fur' the rabbit. Both of these characters are female. I like to think outside of a male body." (Characters role-played are imaginary – hypothesis #2)

He added, "Who I closely resemble myself to is Pussy Cat. I categorize Pussy Cat as being my depressed self, my depressed side, my soul.

When ever I draw her, I draw her like 'oh yes, I am that character'" (Catharsis – hypothesis #3)

He drew me sketches of Pussy Cat and White Fur as he narrated stories of how they became a part of his life. "Every person has his or her own furry side", he said.

"If you were to draw me in furry, what would I be?" I asked as I packed my things to leave.

"A horse" he replied, without even taking a moment to think.



Bethy was a young sophomore student at MassArt. She had a very unique dressing sense, almost always dressed in black, and wore a hat, black eye-liner and a 'bindi' – a tiny mark on the forehead usually worn by Hindu girls. Bethy was a gifted illustrator, but unlike Alex, her drawings did not reflect dark emotions or painful pasts. Her sketches mostly portrayed herself and the space around her.

What intrigued me most was that every creature she drew resembled her in some way or the other.

During the interview Bethy didn't speak much about her artwork. She had brought with her a few drawings, which she displayed to me with very little explanations. The drawings, in fact, didn't need much explanation; they were

Image: Bethy

very self-descriptive to begin with. I asked her many questions about the self-portrayal aspects of her illustrations. She revealed to me that she took on many roles in the narratives of her artwork, and in order to help identify with each of creatures (insects, aliens etc), she would render them with her resemblances- little aliens had 'bindi's on their forehead; insects wore black hats and eyeliners, so on so forth (Characters role-played are imaginary – hypothesis #2)

### **Kids say**

Next on my list of people-to-interview were ardent game players and pre-teens. I interviewed my classmate Claudia's children, Julian and Nicholas aged 9 and 11.

Julian and Nicholas were very excited; they



gave me a demo of all their favorite games. Both of them talked very descriptively about their game characters and often reminded me how much they liked to play them. The kids knew everything about role-playing games and could clearly distinguish them from other game genres. However, they did not display any emotional attachments

Image: nick and julian



towards any game character. I noticed that they would almost always pick the biggest or strongest guy or the character with the 'coolest' weapon. They simply enjoyed games for its entertainment value. They confessed to me that they enjoyed playing 'tough' game characters engaged in mindless killing and massive destruction, yet when asked if they would ever be tempted to do the same in real life; their answer was a definite no.

"If games had educational values I'll let them play games all day", says their mother.

### **Of women and violence**

My hunt for a Goth stopped when Julia, introduced me to Carolyn, one of Julia's students at Art Institute, Boston. Carolyn was also a game player.

The interview with Carolyn was one of my favorites. She was extremely articulate and profound. Her arguments were based on intellectual depth and interesting insights of her personal experiences. She explained to me what a Goth culture is and how she was tied into it. She talked of her parents and her upbringing, her teenage life and the factors



Image: carylon + goth

that influenced her to embrace the gothic culture.

"Goth is a subculture. Goths are a group of people who feel comfortable within each others company. There is no specific thing that defines what you need to do or be to fit into the Goth scene (except of course the implied black clothing)" said she. "I became a Goth

because; Gothic culture is about free thinking. I didn't feel like I fitted in with the 'normal' society. Goths embrace 'different' people like me. Goths embrace all people rejected by the normal society." she added

Carolyn no longer associates herself with the Goth community, although she still sports the



Image: alice

all-black attire. She came to believe that the Gothic community did not denounce drug abuse and promiscuity.

Carolyn is extremely passionate about games. She talked for long about games like Ultima Online, American McGee's Alice and Grand Theft Auto (GTA). She made an interesting comment about how a game lends itself better towards a particular culture: "American McGee's Alice is a Goth game", she said "It's a very twisted version of Lewis Carroll's Alice in Wonderland. The game's association with the Goth culture is that, Alice withdraws he self from normal society and immerses herself in an entirely new world. A Goth would, in a same way, withdraw from the normal society. The wacky art of the game, the evil personification of the Cheshire cat, the overall dark-sided nature of game appeals to the Gothic community."

Carolyn believes that the over usage of violence in computer games would desensitize people to real life violence. She expressed deep contempt towards games that featured scantily clad women. She said, "I just picked up a book the other day called 'women of computer games'. I have to tell you, it (book) bothers me so much. A lot of the girls wore skimpy and revealing clothes. I want my girl character to be tough, real tough, bad-ass. Not right out of a 'Play Boy' magazine. There is a large community of women who play computer games too-they can't always relate to that."

I wanted to find examples of practical implication of role-playing and identities- the next thing on my list. The following interview at first seemed like a mere example of people who role-played in real life as a part of their job. But then, I later began to realize very

important issues that surfaced from this inquiry – Globalization and its impact on a culture. I wanted to address this issue, bring about awareness and even propose a solution through gaming.

### **Who let the jobs out?**

India is the largest English speaking third world country in the world. India produces more engineers annually than the United States. Ever since the proliferation of internet communication and networks, corporations from USA, UK and a few European countries have sought after India for inexpensive corporate services. Job outsourcing was born.

Companies like Dell and HP have set up call-centers in India to conduct technical support and sales through VOIP (voice over internet protocol). Since the employees of call centers



interact with customers overseas on a daily basis, they undergo a special training known as the 'speech and accent training'. Each call-center representative is given a fictional western sounding name like John Smith or Mike Randal, and they are asked to put on an American or British accent while tending to the needs of the costumers. This to me seemed like an interesting manifestation of role-playing in a real life situation.

I contacted Hema, a speech and accent

Image: Hema

trainer who works at these call-centers. Hema has been training spoken English and grammar to the corporate sector for several years. In the interview, Hema clearly explained to me how call-centers functioned. She said, "A call center is the focal point of customer service for most companies today.



Using a variety of technologies, call centers connect the customer and the organization, in real-time, to provide customer service. Call centers take on different forms. A call center can provide pre-sales, sales and sales support or a variety of other types of service"

She demarcated various methodologies and philosophies involved in training call-center representatives. "The training is called Voice and Accent training. It's not quite teaching them how to 'put-on' an accent; instead it's about helping them neutralize their accent. Most people have regional influences in their spoken English. This training helps them to unhinge them from these influences."

When asked why it was important for the customer support representative to 'neutralize their accents, she said, "If you sound familiar to me the rapport builds instantly. It is easier and faster to sell that way. It makes the costumers feel that their problems are being tended to domestically and not by some random person who does not even reside here. If you sound alien I might even not want to talk to you. Accent is potential barrier; it slows down communication and understanding. It's the duty

Image: call centre

of the service industry to do what it takes to make their customers feel comfortable. It's no big deal, really. While some jobs require you to put on formal clothes at work place, this job requires you to put on a slightly different role."

Hema went on to talk about the effects of job market globalization on Indian culture and economy. Among them were widening of generation gap amongst Indian families, 'infiltration' of western culture in regional cultures. "Change is inevitable", she says "you can not eat the cake and still have it. We must learn how to adapt to these changes".

### **The higher value**

To conclude this documentary, I wanted to consult a scholar or a psychologist in my area of research and seek feedback.

I met Harriet Rosenstein who was an instructor at the Continuing Education Department at Mass. College of Art. She teaches classes like Perspectives on Identities, Memory and Dreams

During the interview I learned that Harriet was not only an instructor but a professional psychologist. I started by showing Harriet footages of pervious interviews. Intrigued by what she saw, she provided several insightful comments about each of my subjects. She said, "We see role-playing thought out the entirety of our lives. I don't think we ever stop role-playing. People role-play for various



different reasons. We know for certain that in early childhood that's one of the ways of learning, it's remarkable. If you have watched little kids, the way they play the pie-making mother or the money making father. It's a way of entering ones own culture, it's a way of learning social roles." (Role-playing is a part of human nature – hypothesis #1).

"Role-playing is an element of choice", she said she, "but not all the times. Very often people find themselves immersed in a role where

it isn't play or it isn't by choice, for example the representatives of a call-center or even a waitress at Hooters. But it definitely it is a human capacity. If any of the new media can help heighten, deepen people's capacity to enter in (a role) is marvelous. It would be even more wonderful - if what they are entering into, they can then exit from and view it with intelligent inquiry, after the fact"

Image: Harriet

## **Conclusion**

Over all, this inquiry has been very fruitful. It has proved the hypothesis I set out to prove - Role-playing is a capacity that one naturally inculcates to learn or experience ones own culture. There are many reasons that motivate people to role-play or take on different identities. If identity is self-induced by choice then the motivations are usually to for fantasy fulfillment, or to emancipate cathartic or vicarious urges. If identity is self-induced due to compulsion, then it is usually a temporary requirement of a job. The characters chosen to role-play need not exist in real life; it can be a figment of ones imagination.

How are these findings important to me? Since role-playing is ones natural capacity, it confirms to us that taking on different identities in a computer game will not be awkward.

Role-playing is self-induced (in most cases), that goes to show that game-players do not create suspension of disbelief, instead actively create belief. People take role-playing seriously; therefore intellectual, cultural and social content can exist in computer games. This inquiry has also helped me find subject content for my final thesis application project.







## **CHAPTER 3**

# **Application**

## Final Thesis Experiment

### Cultural Awareness

This project is based on the premise that ***a clear and complete awareness towards a particular subject/issue can be achieved by the use of interactive /immersive interface.***

The particular a subject in consideration need to be controversial on certain level and should have several distinct points of views. The objective of the project is to bring about a clear understanding and awareness towards a subject, but not imbue the author's POV. The users are free to develop their own take on the subject.

#### **The context**

I came to realize a couple of things during my project research documentary – changes in culture caused due to changes in economy brought about by the outsourcings of jobs. One of the ramifications of the cultural change is the widening of generation gap be-

tween parents and their children. The context of the project is built upon the ever drifting cultural gap between the members of a family of a south Indian society.

### **CHRONICLES OF GENERATION GAP**

Chronicles of generation gap is a 4 scene anecdote based off of a conservative South Indian family

#### **Synopsis**

Sanjeev, a rebellious teenager gets grounded for sneaking his girlfriend in the house while his parents were away attending a relatives wedding. Sanjeev is furious for being grounded. His parents then placate him and explain to him clearly the reasons for him being grounded.

## The Characters

**Sanjeev:** 18, born right out of the MTV culture. He has just finished high school and has been fooling around for about a year now with a turn-table. Realizing that he has some talent, he already considers himself an amateur 'DJ' hoping to make it big in the city very soon. The rest of the family has always been skeptical about his unconventional career paths. They are basically opposed to anything he dreams up. He has a girlfriend, Megana, but his conservative folks would never approve of his relationship with her. They want him to quit his musical ambitions and pursue an academic career. His rebellious nature pushes him to stand up against the pre-established norms of the house.

**Megana:** Sanjeev's North Indian girlfriend. Because they are from the North, Megana's fam-

ily is not nearly as conservative as Sanjeev's.

**Uma:** Uma is Sanjeev's younger sister, 16 years old, goes to the same high school as Sanjeev. Although, she does not believe in all things that her parents believe in, she abides by the code of the house. She is very obedient and does well with her grades. She does not have a boy friend, she wouldn't dare to. She is clearly aware that her parents would be opposed to it. She keeps her calm composure at the house all the time.

**Dad:** Professor of physics at Indian Institute of Science, worldly-wised, well traveled. He understands the reasons behind his son's erratic behavior, and often empathizes with him even. But on the other hand he strongly believes in his roots, his culture and traditions. He knows that he has to do what he must to

keep his family traditions intact.

**Mom:** A house-wife, she does not go to work like most modern Indian women her age do. She is the law-keeper of the house. Very traditional and pious in her upbringing, she wants to bring her own children the same way. She believes in arranged marriage and joint-family. She cannot fathom the life-styles of the modern world. Least that she could do is keep her family from going astray. Sanjeev's mother is most aggravated by his behaviors.

### **The Story**

The story is broken up into linear chunks of interactive and non-interactive scenes. The scenes unfold in a fixed order. The interactive scenes take on a computer game like feel and appearance. The player's actions in the interactive scenes cannot change the outcome of the story. In each interactive scene, the

player has a goal. If the player achieves the goal, the story progresses to the next scene.

If the player fails, he/she must start again at the beginning of that game scene. This structure is similar to the linear arcade games of the 1980s such as Donkey Kong and Mario Brothers.

### **Non-interactive Scene 1**

Sanjeev is waiting for Megna outside her house. He is thinking about the conversations he had with his DJ friends a few minutes ago. They had all bragged about how it was ok for them to take home their girlfriends and that their folks wouldn't mind. Sanjeev is frustrated. He says to himself, "Why are my parents so difficult? I am sure they will freak out if they found out that I even have a girlfriend ... I can't stand this any more." Megna just walks out, "where are we going",

she asks.

“To my house”

“Are you crazy? Your mother is going to freak out on me!”

“Don’t worry; mom and dad have gone to Hyderabad for a wedding. Let’s go home and watch a movie or something.”

“I know your sister will be ok with it, but what about the maids”

“I have it all figured out, lets go”

“Don’t tell me I dint warn you”, she says as she sits behind him on his motorbike.

Sanjeev parks his motorbike at a public parking lot close by to his house, and decides to walk her to the house. He would get caught by his house guard if he rode with her all the way into his own garage.

Interactive Scene 1: SNEAK

The camera zooms out to a birds-eye view

orthographic 3D game environment. This is the cue for the player that the game has turned from a cut-scene to an interactive scene. There is a good reason why this scene needs to be orthographic 3D (and not FPS), which will be discussed in detail in the section called design issues.

In this interactive challenge the game player gets to control Sanjeev. The main objective is to escort Megna surreptitiously into Sanjeev’s house. The challenge is to look out for all the possible hurdles – Mr. Sheriff, his nosy neighbor, the house guard, 3 of his house maids, Uma etc. After the successful completion of this interactive scene, Megna is escorted into Sanjeev’s room.

### **Design Issues**

**Plot:** This particular interactive scene follows a ‘classical design’ plot.

CLASSICAL DESIGN means a story built around an active protagonist who struggles against primarily external forces of antagonism to pursue his or her desire, through continuous time, within a consistent and causally connected fictional reality, to a closed ending of absolute, irreversible change.

- Robert McKee, *Story* (New York: Harper Collins, 1997), p. 45

Protagonist: Sanjeev

Major NPCs\*: - Megna, Sanjeev's girlfriend

- Mr. Sheriff, Sanjeev's nosy neighbor

- Uma, Sanjeev's little sister

- Maids

- House Guard

View: Bird's Eye-View Orthographic 3D

This particular interactive scene begins with Sanjeev and Megna on a street close by to Sanjeev's house. As for Sanjeev, he knows

exactly where his house is or where Mr. Sheriff would usually be. A game player will not know this; therefore, in order to convey all of the necessary information, the scene view has to be bird's eye view.

So why orthographic 3D and not any other form of 3D? In an orthographic rendering the character closest to the viewer is about the same size as the character away in space. This will not be the case in a FPS\*\* or a photorealist rendering- foreshortening will occur due to perspective.

\* Non-Playing Character, a character in a game with whom one can interact but not control.

\*\* First Person Shooter. The player's on-screen view of the game world simulates that of the character.

Interface Elements

This interactive scene will involve several



interface elements that are employed to give the game player vital information about the game play. The following are a few highlighted elements of the game.

- a) Caution meter: The caution meter alerts the user about the proximity of the potential hurdle NPC.
- b) Field-of- Vision (FOV): The game player is capable of seeing each hurdle NPC's field-of-vision. The probability of Sanjeev being busted is based on how close of range he is in hurdle NPC's field-of vision
- c) Situational Options: Situational options are choices that are offered to the game player pertinent to the current situation in hand. For instance, the character in front of a door could have the following choices.
  - i. Open door
  - ii. Peep inside keyhole

What the core audience will learn

The target audience of Chronicles of Generation Gap is broken down into 3 categories.

Category A: 16-22 year old Indian men (since the context of this case study based on Indian culture

Category B: Parents with teenage children

Category C: Any body interested in Indian Culture (like an anthropology student).

This interactive challenge is the most fruitful for Category C. This challenge, by allowing the user to experience a day in an Indian teenager's life, proves itself as one of the most interesting ways to learn cultural differences.

### **Non-interactive Scene 2**

Its late afternoon as Sanjeev gets home from partying all night at a resort where he was hired to DJ. One of the house maids bumps into him as he steps up to the door. Without apologizing she hides her face in her sari and

scampers away. Sanjeev wonders, "What was she doing at home this time of the day? Today is not pay-day." As he walks in he notices that his mom, dad and sister have been discussing something at the dinner table. Immediately, he reckons that there is something fishy going on, maybe the maid has found out about his bringing Meghana over and told them about it. He decides to act nonchalant and walks up the stairs to his room as usual.

His parents stop him. A brief interrogation ensues.

Mom: Sanjeev, can you hold on a minute?

Sanjeev: What's up, mom?

Dad: We need to talk to you

Sanjeev: What is it now? (annoyed)

Dad: Did you bring some one over when we were out?

Sanjeev: Well, er... nobody in particular, why

what the matter?

Dad: Did you bring a girl home?

Sanjeev: Oh, ..yeah..yeah.. one of my old classmates, I was just showing her how to mix music.

Dad: What sort of music is mixed in ones bedroom?

Sanjeev: How do you guys know all this? Ok.. I..I have a girlfriend, she came over to see me.

Mom: You have a what?! How dare you say something like that? Is this how we brought you up? You cant bring home any girl you like, what will our neighbors think?

Sanj: I don't care what others think.

Dad: Stop answering back, we live in a community, we are not nomads. We need to care about what others think of us.

Sanj: Why are you guys making it so melodramatic? What the big deal, I have a girl friend its

probably the most natural thing any one my age would do. What do you think is so wrong?

Mom: You know what is wrong? You are just turning into being like the American kids in MTV – you want to do everything sooner than its meant to be. Now is the time you are supposed to be concentrating on studying, making your career; not messing your brain with women and relationships.

Sanjeev: Its not that I haven't been working on my career. I'll be playing at the Inferno tonight. I got a couple of projects, I am getting there.

Dad: what kind of career is being a DJ?

Mom: What is a DJ job actually?

Dad: Its some one who plays music for night clubs and discos.

Mom: Music, night clubs, women, I don't like anything I am hearing. It all sounds like a life style of a philanderer.

Sanj: Mom, that's not true.

Mom: Yes, that is the kind of people you

are mixing with. Tell me? Will a girl of good upbringing ever go to some one else's house all alone with a boy? Have you ever seen Uma doing something like that.

Dad: Seriously, what is it with you guys these days? Why do you want to blindly ape the west, abandoning your family values and cul-ture, adopting into things that belong to you..

Interactive Scene 2: APING THE WEST

This is an interactive dialogue session. All the four members of the family are involved.

Sanjeev is furious and cannot contain himself. He questions the pre-established tacit norms of his house and culture. Parents on the other hand find themselves giving him a fitting reply, defending what they have long since accepted and embraced without a question.

The user gets to choose and listen to the POV of the person he wishes to learn about.

The following is the categorized compilation of the dialogues/POVs

.....

DAD

Culture

The media has spoiled you; it has always been a bad influence on the youth. The west has a way of glamorizing every thing. You are just a victim of the system.

Sanj: I am not the victim. I am the child of the system. Why don't you folks learn to change with the times?

Mom: Maybe we should discontinue the cable TV, that's where these kids are picking up the weird things.

You can talk like them, dress like them, listen to their music, amidst all of this, why lose what's yours? Have you ever sat down to think – have I learnt enough Hindi or Tamil? Do I take any interest in Hindustani music? Do I

spend enough time with my folks or grandparents? What's the point in living in a culture that offers a myriad of rich experiences. Its not what you gained, its what you lost that bothers me.

Sanj: Boy, there is no stopping when this man starts lecturing.

Uma: I think dad has got a point here.

Relationships/Marriage

Relationships come with responsibilities. 18 is definitely not the age for seeking relationships and commitment. May be you should shape your carrier for now and leave commitment and relationships for a later time when you can actually handle it. It's a great thing that we have arranged marriages in our culture, it has proved to stand the test of time.

Sanj: That's not going to work any more.

Women have started to work, they are independent, they are not going to be just your house-wife any longer.

Arranged marriages do not force you in any way, in fact it is devised to take the pressure off of you. Your life partner is chosen by the very people who know you best and not some stupid online dating service.

Sanj: No, wait a minute. That is not totally true.

Don't you guys use a marriage broker ?

Uma: Marriage?.. What?! Why are we even talking about that now? He is just 18 for gods sake!

Society

You are never alone, you are always a part of the system, and you should embrace this idea even, if things don't work favorably for you. Have you ever thought about Megna's place in the society, and how that will affect her?

Sanj: You know what? We don't care!

Do you think you will be able to pull the same thing off in front of her parents? Will they approve of it?

Uma: They are North Indians, I am sure they will be ok with that.

Yes, control is necessary to protect you and her from uncomfortable predicaments.

Career

I respect your passion for music and your enthusiasm in making a career out of it. But I don't think DJ-ing is stable job, you are not going make a living out of it. Think of the time when you will be older, do you think you will still be interested in clubbing or partying?

Probably not.

Sanj: Haven't we heard that before?. He has no faith in his own son.

I defiantly don't want you to jeopardize your career; you should be spending time working towards your college admissions. There is not need for you to start earning now, we are here to support you. I know you want be independent and all, but at the moment I seriously

insist you work on acquiring a degree. I cant assert enough how important it is right now for you to do as told.

Uma: Dad, is so right. He cant be serious about DJ-ing. If I were Megna I would feel so insecure with him right now.

Mom: What is a DJ? Is that even a job? why does he think he has to earn? Haven't we given him everything he wanted?

MOM

Culture

I don't like what you have turned into. I don't approve of your dressing, what will people think if you run around with that torn jeans and dirty long hair? Your cousins haven't turned out that way, what happened to you?.

Sanj: This is aggravating. Its always about

'what-will- people- think'. Why do I have be like anyone else? Wouldn't that be known as aping someone?

Uma: Oh, don't even talk about our cousins. They are so 'wus'. They cant stand up for themselves.

Dad: Oh these teenagers - rebel for no particular reason. His attire doesn't bother me that much. I am sure he'll grow out of it.

You step in and out of the house when ever you want to; you are always out in the night.

And when you do stay at home you are always in front of the TV or on the phone. And now you started bring home women?!

Uma: I knew this was going to happen some day.

Relationships/Marriage

I would have nipped you off at the bud, had I known you would end up like this. Now he says he has a girl friend, oh! My God, he is so daring! Girlfriends, dating, love marriage are a

part of western culture not yours.

Sanj: You would do the same if you were in my place.

Uma: Here we go again. They never get tired of reiterating the same thing over and over.

Dad: Things are changing. I don't blame him actually.

Are you going to create havoc by standing against your family all for a girl of different caste and community?

Sanj: Caste? Community? Its 21st century, nobody talks likes that anymore.

Listen to your elders. Quit all of this and start concentrating on your education.

Society

You should respect your family, your neighbors and the community you lives in. A society is made of people caring and respecting other people. One should never go against

the norms of the society, it is a very important part of our Hindu culture. The enforcement of this begins at home, so you grow up to be responsible citizens.

Sanj: What is wrong with her? Its not like I killed someone.

Career

If you are interested in music, why don't you sit down with me I will teach you some Hindustani vocals. It will make you feel relaxed; it is good for your mind and soul.

Uma: Sanjeev learning Hindustani? Now, that will be a pretty sight.

I don't know what that DJ music is all about. It doesn't seem very healthy to me, working late nights amongst drunken people and blaring loudspeakers? How can that be any healthy?

Uma: Clubbing would be fun once every week. But doing it every day would be an over kill.

You know, you don't have to earn now, we will support you. Just concentrate on your school.

SANJ

Culture

I am not aping anybody. The fact of the matter is, you and I weren't brought under the same environment. Things have changed since then, I am exposed to more media than you ever did. I mix around with a lot of different people, we get influenced by each other.

Dad: There is no harm in being influenced, but that shouldn't totally change you.

Mom: No, you just want be like the kids on MTV. You are obsessed with western ideologies.

Relationships/Marriage

I don't understand, what's wrong with me having a girlfriend? What do you expect me to do? Wait until you find a girl, who you think is compatible and blindly get married to her? Why should I always do what you think is right? Its almost like I am leading your life, when do I get to lead my own life? Where is my freedom of choice?

Mom: Yes, we know what is best for you

Dad: What about the choices you never even considered? We are just trying to bring direction and focus in his life. That's what parents are supposed to do. Why doesn't he get it?

Uma: Wow, this is like one of those afternoon soap operas!

Career

A DJ is a musician. It's a serious profession.

Uma: No, its not.



I want to do what I think is right for me. I do understand that it would mean working long hours in the night, but every job has its own hazards. I am passionate about my work, I think I can handle it.

Dad: No way. He has to go to college, I can't let him do what he wants to.

Mom: He is being stupid!

Society

My society consists of my friends and peers.

Your society consists of your peers, not mine.

Why should I reform my activities to please one of your peers? Megna should not visit me so Mr. Shareef can think I am a decent boy?

How lame is that?

Uma: Mr. Shareef is such a nosy parker, why doesn't he mind his own business.

I think you are treating me this way so people can think that you are in-control of the house.

Dad: Where does he get that idea from? Now this is getting bad.

Mom: He shouldn't be talking to us like that!

My point is why should there be any control in the first place? Shouldn't a society or family be based on understanding and tolerance?

UMA

Culture

I don't think he is like anyone, that's just him, that's how he is. He is not weird or anything, like some of the guys I have come across. But I think he should mellow things down for the house. I better not say that to him, he is going to get really mad at me and

think I am taking mom and dad's side. I really hate it when he is hanging out with those bitches from Bombay and those dope heads of his class. But I still love my big brother, he is so cool!

#### Relationships

I don't like all the girls he hangs out with, but Megana is sweet, I like her a lot. We get along very well. I don't know why dad and mom are opposed to him hanging out with her. I might like a guy some day; I don't know how I'll handle it.

#### Career

I like the club scene and all, but being a DJ full time? Something's shaky about it. I don't think I'll date a guy who has got nothing besides being a DJ. Sanjeev is going through one of his usual I-wanna-be-a-musician things, I am pretty sure he is going to snap out of it soon.

#### Design Issues

Plot: Interactive dialogues

Protagonist: The player gets to choose the protagonist.

Major NPCs: all characters apart from the protagonist

View: Experimental 3D spatial panning/camera

The game player's view shifts from one form to another solely based on the player's choices. What is not left up for the user's choice is the transition between each of the choices.

Let us say, if one wants to learn about the POV of Uma, he would simply click on Uma and the camera will transition between where it was to Uma's first person view.

This sort of real-time camera action is employed to give the user a sense of who the character is in relation to spatial exis-

tence of the major NPCs. This is also a way to lay emphasis on the fact that the user has currently taken on the role of the character he just chose. Music plays a vital role in the manifestation of this idea. The movie, 'Saving Private Ryan' and TV sitcom 'That 70's show' have employed this technique.

#### Interface Elements

Aping the west has a few intuitive interface elements panning tool, zoom tool, rotation tool etc. This scene is designed to reflect unbiased POVs of different people, hence it consists of 2 layer of information- POVs of what is being said and what is being taught.

#### **Non-interactive Scene 3**

At the successful completion of the previous interactive scene the following non interactive scene ensues.

Sanjeev's parents decide to put an end to the conversation that seemed to be going nowhere. They reprimand him for doing things without their knowledge and not spending enough time working on his college admissions. They tell him he is grounded and order him to go to his room. Defeated, Sanjeev walks upstairs to his room.

#### Interactive Scenes 3 & 4: PLACATE 1&2

These are 2 different interactive scenes of similar strategy and set up. Sanjeev's parents feel sorry for their son, who is now sulking in his room. They try to appease him on separate occasions.

Placate 1 is where Sanjeev's mother fixes him dinner and slowly try to rationalize to him about issues that particularly bother her - him not spending enough time at home and about his receding interest in college educa-

tion. The user gets to control the mothers emotions/actions, based on which Sanjeev would reciprocate appropriately. The challenge is to grab the attention of Sanjeev so that the mother can convey her message.

Placate 2 is where Sanjeev's dad goes to his room, fixes his broken amplifier and gets talking to him about his DJ career. Similar to Placate 1 the user here takes on the role of the dad, control his actions and emotions, in order to get Sanjeev to listen to him.

#### Design Issues

Plot: Emotional or gestural interactive.

Protagonist: Mother in Placate 1 and Father in Placate 2

Major NPCs: Sanjeev

View: 2D Third person

Interface Elements: The input device will be a single knob, similar to the "paddle" of a Pong game, plus a single "Start/Select" button.

#### How it works

The player controls his character in real time, with a feeling of direct connection between the input device and the action on the screen.

This is not "limited interaction," where the player makes discrete choices (e.g. from a multiple choice list), then waits to see the results unfold.

Each interactive scene is a unique game in which the player controls the emotional behavior of a character as the character participates in a scene. The knob (input device) will typically control the emotions or attitude of a single character in the game scene (usually, the protagonist). Each game scene will require the player to accomplish a goal solely

by adjusting the player character's attitude. Within one 360-degree turn of the knob, the character's attitude will change from one extreme to the other. The extremes will either be along a single dimension (e.g. pleading/not pleading, threatening/not threatening, soothing/not soothing) or two dimensions, with neutral in the middle (e.g. mocking/neutral/bullying, bothering/neutral/soothing, attacking/neutral/fleeing, or groveling/neutral/threatening).

Normally, the knob will not control any physical movement. That is, it will not make the player character run left or right, raise or lower his hand, etc. All the player character's physical movements will be under the computer's control. They will be appropriate to the character's attitude (as determined by the knob) and the behaviors of other characters.

The computer-controlled movements that correspond to attitude settings should differ only slightly from "nearby" attitude settings. Big differences in physical behaviors can create confusion in the player's mind. The player will wonder "how did I make him do that?" if behaviors are surprising and starkly different from each other. On the other hand, if behaviors blend together in a continuum, the player will more easily understand the effect his knob inputs are creating.

## CONCLUSION

### Significance

This thesis serves as a threshold to the development of games with higher social and cultural values. By expanding the bottle neck of entertainment, my study puts the words 'fun' and 'engaging' to the less popular games of educational, cultural and moral premises.

My thesis makes a loud statement, 'educational games need not be a drag' or the vice-versa, conventional games need not be hallow or devoid of palpable benefits. Development of such games are important to us, for games are now a medium of communication; it is fast becoming a part of our culture and learning.

The game industry has a lot to benefit from this as well, because it would include a border audience who currently think games are potentially shallow.

My research and process enumerates a wealth of untapped areas of game and communication design that are overwhelming with potentials - the techniques to create and deepen role-playability, immersion, multiple perspectives and empathic situations. The interactive projects serve as blue print for designers who are working on similar ideas.

### Contributions

The potential contributions that my thesis research and projects could make to the game industry and communication design are many.

### Extensive Study

The thesis research an in-depth exploration of computer games as a communication medium. It investigates the key characteristics of game design in isolation, especially the ones that are less exploited. The research

is an extended study into the aspects of role-playing, immersion and identities and its manifestations in both real life and game-play. The interview sessions scrutinizes people's motivations (to play games) and outlines several psychological explanations for each. The documentation will serve as valuable resources.

#### Pragmatic Approaches

My process and research outlines several different ways to utilize the elements of game design in communicating issues of social and cultural value. It illustrates practical examples, hypothetical experiments, proofs and analysis of success and failure. It also spells out various techniques involved in creating immersive, entertaining, heightened emphatic situations in computer games and interactive narratives.

#### Application

The final project is a demonstration of how to implement the techniques- a manifestation of an interactive learning narrative. It's the marriage of narrative and interactive immersion with a unique cultural content. The final implementation addresses communication problems with visual and interface design solutions. By exemplifying the usage of narrative, music and interaction design, the projects demonstrate the methods of creating emotional depth in games.

Applications of my thesis research and study can manifest in many other areas in various different forms. Education: as educational games. Politics: as propaganda machines. Travel and Tourism: as games that impart different cultural experiences. The techniques can also loop back into the game industry for creating new and improved RPGs.

Future:

The future of computer games is in the emotional realm. As games inch towards visual and technological perfection, saturation is imminent. When this saturation point has reached, the growth in these areas will recede, giving rise to the much awaited explosion in games with rich emotional experiences. In addition, the entertainment software industry will diversify to address a wide range of people's requirements and tastes. As computers continue to replace textbooks in schools, I reckon that games will play a pivotal role in reforming our system of education and pedagogy.

Final Thoughts

The work I've done for my thesis over the past six semesters has been satisfying on many levels. The exploration has answered many questions and proved several of my hypotheses.

While the real booty is deep down inside, I am for the moment pleased to have unearthed a part of the treasure.

As I conclude this thesis I realize that I am left with even more daunting questions than when I started. This inquiry is by no means complete. Further research is necessary to complete the vocabulary I started. Further experimentation is imperative to pave the way for future games to come.



