

# How Decisions In Games Affect Real Life Decisions

As partial fulfillment of the Degree in Animation Art, it is required of me to produce a two to three minute animated short during a production timeline of fourteen weeks. As for this semester, we were required to do a short test animation of our character. I have based my character on someone who is indecisive and has problems coming up with a solution. At times when he makes a decision, it is always impulsive and therefore the decision he made was a bad one. At one point where he stands there deciding over three different options presented to him, the problem is solved for him already. Therefore, the point I am trying to make is that coming up with a solution need not necessarily be done by you for it could be solved on its own. This piece of animation deals largely with how decision making plays an important role in our everyday life.

Using my theme from my animated short as a starting point, this paper aims to look at how decision making is part of our everyday life, be it in playing computer games or in real life, and how decision making in games affect our decision making in real life. It will begin by providing readers with an introduction to what decision making is all about, which will lead to the cognitive process behind decision making and the role of emotions in decision making. Then it will look at decision making in real life and decision making in computer games. The paper will explore how and why humans use emotions to make decisions, and why it is unwise to do so. The paper will also look at

Examples of games which affect our decision making will be mentioned as well, and the paper will conclude by discussing the significance of decision making in games and how it affects us in our everyday life.

## Chapter 1

### Decision Making

According to Karl Albrecht (1980), he said, "The typical human life seems to be quite unplanned, undirected, un-lived, and un-savored. Only those who consciously think about the adventure of living as a matter of making choices among options, which they have found for themselves, ever establish real self-control and live their lives fully."

What he meant was that in a life of an individual, he or she may live a life without being prepared for anything and only those who lived prepared will have total control over their own lives. In other words, one has to be prepared to make decisions in life if one seeks to establish himself in society.

To be able to establish oneself, one needs to fully understand decision making.

According to Karl Albrecht (1991), “decision making is defined as the process of making choices among competing courses of action,”

It means that decision making is simply defined as making a decision based on the number of options presented to the person.

According to Charalambos D. Aliprantis and Subir K. Chakrabarti, we, as humans, have to make decisions in our everyday life. For example, a company has to decide what strategy to use so as to survive and compete in the industry, the government has to make decisions on the policies they have imposed on the public, students have to decide on the courses they want to take up every semester. The list of decisions to make seems to go on forever and that just goes to show that in our everyday life, people from all walks of life have to make decisions.

When faced with a problem, we tend to ponder the decisions we will be making and if it is a good one or not. At times, people would spend so much time just thinking of making the right decision. However, given the same situation to two persons, both of them would make different decisions. Apparently, one will make the right decision, the other will make the wrong one. Why is this so lies in the fact that each individual has a benchmark to measure to, and to analyse the decisions from there. Also, different individuals have their own goals and benefits which ultimately will affect the way they make decisions.

An individual can make a better decision and make the right choice by analysing from a set of different choices, and by making the right choices; the individual would directly affect the outcome. However, this is not entirely true. Many cases have shown that the happiness or satisfaction that derives from making the right decision, not only depends on what the individual does, but also from an outcome of another individual's decision. Such common affinity shared among different individuals is so great to the point that it has to be, beyond any doubt, taken into account when it comes to such situations.

### 1.1: The Role of Emotions in Decision Making

In life, we always make decisions. Decision making is part of our cognition whereby we have to make a choice out of so many others. Every individual has his own way and own alternative approach. It is helpful to note that we must not use emotions to help us in decision making. As humans have feelings and are emotional, it is impossible to not use emotions in our decision making process.

When people use emotions to help in their decision making, wrong and bad decisions were made. For example, one is walking among the crowded people on a street. Suddenly he accidentally steps on someone else's shoes and apologises immediately. However, the person is still angry and makes an ugly scene, even challenging him to a fight.

If one is overwhelmed by his own emotions, he would be angry because he is still being shouted at and a fight is inevitable, despite apologising earlier. It would not help the situation at all if one is overwhelmed with emotions for he could just make matters worse by arguing back. By not using his emotions, he uses logic and he can understand that by arguing back is not wise, he will walk away instead.

When making a decision and one is all full of and overwhelmed with emotions, it would be helpful to take note that using emotions would not be a good idea for one might end up making the wrong decision which would in turn bring about consequences. We humans may be emotional creatures and there is always a time when emotions come into play, but nevertheless, emotions should not be used together in decision making.

An emotional decision is made very quickly. It all boils down to our brain whereby it processes the rationality. This is usually the subconscious part of our brain which instinctively affects our decision making when we get into quarrels or facing life threatening situations.

A common type of emotional decision involves the usage of logic but ultimately what drives the decisions is emotion, which overrides the logic to support emotional choices.

Due to the fact that we humans are emotional beings, we tend to let emotions get the better of us, and therefore there is a tendency that we would use emotions to make decisions instead of using logic. Such a case is defined as logical decision making versus emotional decision making.

"Emotions should be left out of the investing process,"

- Warren Buffet

According to him, it is not wise for anyone emotional to invest in the stock market, and the reason is the same as to why emotions should not be involved when making a decision.

We should use logic for all the decisions we make during our lifetime, instead of emotion, mainly because when we use logic, the decisions we make are mostly right ones. Reason being that decision making with logic uses deductive reasoning, instead of our own feelings.

The following is an example of two investors, one using logic and one using emotions to make decisions. There are two investors, John and Mary. John made a decision to buy 100 shares of a particular company because he has done his homework and did some research on the company, finding out that it is currently undervalued and is a good purchase.

Mary, on the other hand, uses her emotional feelings. She buys 100 shares of another particular company because she remembers using that particular product when she was younger. She did not do any thorough research and impulsively bought 100 shares based solely on emotion itself.

John is more likely to succeed in this investment because instead of using his emotions to decide, he used logic to think of what would be the best option for him. Only by doing research that he found out this particular company is undervalued and therefore he made the right choice in purchasing the shares of that company.

According to neuroscientist Antonio Damasio, he did a study on patients who had brain injuries and realised that they had lost their sense of emotions because the part of the brain that generates emotions had been damaged. The patients had trouble making decisions. They know what they need and should do but found it hard to make simple decisions like finding a place to eat or live.

At the point where we decide to make a decision, our emotions play a huge role. Despite what we believe to be logical decisions, if the logical decisions do not feel right, we will think it is not right. This is an emotion that comes from within our subconscious mind. It is this part of the mind that our emotions stem from and that no matter what decisions we make, emotion is always a part of it.

## 1.2: Methods of Decision Making

When it comes to making decisions, there are plenty of methods and techniques, plenty of options and plenty of individuals willing to stick their necks out just to make a decision, yet some prefer to play it safe.

In our everyday lives, we make countless decisions. Some of the decisions we make are pretty straightforward and does not require much thought into it. For example, is this essay ready to be submitted to the lecturer? The obvious answer is only when the essay is fully completed and only the person writing the essay will know. Yet, there are other decisions which are not going to be as simple and direct. Such decisions require time to ponder over it. An example would be a boss deciding over a number of potential job candidates.

When it comes to complex decisions, it tends to involve a few typical issues such as uncertainty, complexity, high-risk consequences, alternatives and interpersonal issues.

Under uncertainty, there are a certain number of facts which maybe unknown to the person making the decision. Under complexity, one may need to take into account of the fact that there are many correlated factors. As for high-risk consequences, it needs to be noted that the consequences of making the decision could be severe. As for alternatives, each decision that comes into play has its own problems such as the

consequences and doubts. Lastly, interpersonal issues mean that each individual has different reactions to the decision being made.

Considering the issues at hand when making such difficult decisions, it would be helpful to use an effective method which will help in making better decisions. Yet, of all the decisions we are making out there, how do we know whether we are making the right decisions? Here is where the importance of decision making methods comes in. Achieving the ultimate goal all boils down to the important decisions we make.

A simple decision making tree is an example of a successful method used by many business companies out there. It helps them sort out their options and choices carefully and this allows us to learn how people arrive at the decisions they make. According to Arkes and Hammond (1992), "The decision maker needs only 4 types of information to construct a Decision Tree".

1. What are my possible courses of action?
2. What are the events that might follow from those actions?
3. What is the likelihood of each event?
4. What is the value of each event to me?

A decision making tree gives us the time to think and decide on the options presented to us. Decision making in real life is as such. However, decision making in games are totally different from decision making in real life and in the next chapter I will be looking at games and decision making, and types of games that affects our decision making in real life.

## Chapter 2

### Decision Making In Games

"Alpha Protocol is based in the spy genre, and has certain trappings because of that, but because the game is based basically in the modern day, we wanted to reflect the ambiguity real world decisions. There are very rarely clear-cut good and bad decisions in real life, and as a modern day RPG, we wanted to reflect that,"

- Matt Hickman, Producer, Alpha Protocol

Matt Hickman is the producer for the game, Alpha Protocol. What he means is that he is trying to incorporate real world decisions into the game. In the previous chapter, I looked at decision making in general, and how it is done in real life, the cognitive process behind it and the methods to making an effective decision. In certain games, however, we do not have the luxury of time to think and ponder about what decision to

make. For example, First Person Shooter games require you to make quick, split-second decisions or you might get killed by the enemy. Yet, one has to be extremely aware of his or her surroundings for they might end up shooting their own teammates instead of the enemy.

Other games, give you time to ponder over your next move. Once you reach a point in the game, the available options will appear and you get to choose which option to make.

Video games aside, there are board games which also require the need to make decisions, such as Risk, where making a wrong decision could mean an entire army being wiped out.

Video games which are designed for entertainment purposes can engage the players more with their realistically modeled environment and sets. Players will be more immersed into the game and it gives them a sense of realism. The more realistic it is, the more players will feel they can relate it to real life. In such video games, players assume the role or persona of a character, and bring their morals and motivations into question. The decision they make in the game, for example, should they decide to save the hostage or should they just ignore the hostage and carry on their mission, plays a huge role in how the game will turn out. If they decide to act on their morals, they will decide to save the hostage and compromise their mission which will lead to a set of consequences which they will face later. Or if they based on their motivations, they might just carry on ahead with the mission as planned and leave the hostage alone. Either way, it gives players a chance to face the consequences after making their decision. In this case, decision making in video games affect how certain people make decisions in real life. They call upon both morals and motivations. For fast paced action video games such as First Person Shooter games, requires players to make split-second decision in the face of incoming enemy fire.

From here on, I will look at the different types of decision making games that affects our decision making skills in real life.

## 2.1: Case Studies

According to a study released on September 15, 2010 by researchers from the University of Rochester, it is believed that such decision making skills can relate to everyday life. The researchers studied the skill sets of two groups of people, gamers, and non-gamers, and put them through a set of experiments which required them to make simple decisions. In one particular study, these groups of people were to look at a series of dots and decide the direction of where the dots were coming from. The results show that gamers were able to identify the direction faster and judge quicker than the non-gamers. In another study where they had to go through a hearing test whereby sounds would be heard from the left ear or the right ear, the gamers did well and were also able to decide quicker which direction the sound was being heard.

According to the researchers, only such fast-paced action games can relate to real life decision making. Other non action games such as strategy games and role playing games are not as effective as action games. Non-gamers who were made to play such action games for prolonged periods also showed a remarkable improvement in their decision making. The reason that action games improve decision making skills is because players who play such games, tend to make right and accurate decisions for every unit time. Therefore, if one is a soldier in the middle of a battlefield, such a skill determines between life and death.

People use probabilities to make decisions. These calculations are constantly at work inside the mind and this process is known as "probabilistic inference".

What happens is that the brain collects minute amount of visual and auditory data, finally collecting enough to make a decision. Fast paced action games like Call of Duty and Medal of Honor are what cause players to make split-second instantaneous decisions according to the current situation happening around them.

Most decision making games consists elements from these three types of games, games of skill, games of chance, and games of strategy. It aims to provide players an environment where they can learn to hone their decision making skills.

For example, the Game of Life. This game is a simulation of one's life, giving players an opportunity to experience life in general and the decisions you have to make in life, such as choosing between going to college or going out and starting a career.

Other games which involve uncertainty, for example, card games such as Blackjack and Yahtzee gives players a sense of risk, uncertainty and probabilities. In Blackjack, one has to make a decision when he has to draw more than three cards. He could then take a risk by drawing an extra card and hoping to get a perfect score of twenty-one or less and hopes the opponent scores a lower point than him. If he scores any point above twenty-one, he loses. As for Yahtzee, it requires players to make decisions during the play as to which dice he or she should choose to keep while in the process of making combinations. Probabilities are involved as well.

Chess is also another game that involves a lot of decision making. Chess is known to help develop and hone our visualising skills and coming up with winning strategies.

"You sit at the board and suddenly your heart leaps. Your hand trembles to pick up the piece and move it. But what chess teaches you is that you must sit there calmly and think about whether it's really a good idea and whether there are other better ideas."

Stanley Kubrick

Life is just like a game of chess. While playing chess, one has to be able to read his opponent, must be able to read his next move, and be on the lookout for any signs of

danger. Humans, however, can at times be unpredictable and surprise you with his next move. All one has to do is to keep playing, keep reading the board, until one of them wins.

In life and in games, whatever decision has been made, one will bring about a series of events that comes after that. It can come about as a consequence, or it can be a good one. It can be predictable, or maybe unpredictable, whatever it is, to prevent yourself from being tied down by the chain of events set in motion, you have to take these events into consideration and respond to them properly.

An individual is able to control the outcome of the game and how it will fold out, only when he is playing against himself. Otherwise, one can never be in control of the game's outcome. This is why games like Chess and Game of Life are interesting. The game will not proceed if one is still deciding his next move. Until a decision has been made and an action taken, then the game will proceed, and the reason why one is taking his time to decide is simply because he wants to make the correct choice. He is taking the time to think and make sure he does not make a mistake.

As you play, your sense of awareness improves and it will be much easier to read your opponent. This will give rise to you coming up with different strategies to use in different situations and win the game. However, this can only be achieved if you raise the standard of your game by studying the tried and tested strategies, and also playing against much better and stronger opponents. You either win, or you lose, and you learn from this, gain some valuable experience and this will keep you going.

In another game that was recently developed by game developer Jane McGonigal, it is a game that seeks to raise awareness through decision making. This game is called Evoke. This game helps players to become good problem solvers and what it does is that they want young people all over the world to band together and help to solve all the world's problems, in other words, try to save the world by learning social innovation skills.

"we're witnessing what amounts to no less than a mass exodus to virtual worlds and online game environments,"

- Economist Edward Castronova

What that means is that gamers feel more sense of achievement in the online world. The average child will have spent 10,000 hours of playing online games by the time he or she hits the age of age 21. That is why this game seeks to get youngsters from all over the world to band together and help solve some of the world's biggest problems.

In an earlier research released early this year from Texas A&M International University has shown that video games depicting violence can cause some players to be aggressive and hostile.

For example, the game Grand Theft Auto. It allows player to car jack, whip out a gun and shoot at random people, and even kill policemen. That, unfortunately, was how it was when then 18 year old Devin Moore shot dead three policemen from Alabama.

"Life's like a video game. You've got to die sometime."

- Devin Moore

Those were the words of a cold blooded killer at the point when he was arrested. Due to many nights of playing the game, it has influenced Moore so much to the point that he would so much as shoot a police officer without a flinch.

### Chapter 3: Game Theory

Game theory, according to psychologists, is the theory of social situations. Even though game theory is applicable to games such as poker, research on game theory mainly looks at how different groups of individuals interact and communicate with one another.

Game theory is split into two different branches: co-operative game theory, and non co-operative game theory. Co-operative game theory deals with a group of two or more individuals banding together in an effort to achieve the same goal, whereas non co-operative game theory is the opposite, where a group of individuals communicate with each other so as to achieve his or her own goals. The difference between co-operative and non co-operative game theory is in the portrayal of affinity between individuals.

Three elements are always present in game theory.

At least two participants/individuals are present,

Each of them has a series of different choices,

Based on each outcome, each participant/individual will stand to gain or earn something.

#### 3.1: Decision Making Using Game Theory

An example would be The Prisoner's Dilemma.

##### Fig 1.0 Prisoner's Dilemma

Based on the Prisoner's Dilemma table shown in fig 1.0, what happens is that, there are two criminals, Henry and Dave, and they are both arrested. If Henry and Dave both plead not guilty, they both get a sentence of two years jail each. However, it is here on that both criminals have to make a decision. If Henry pleads not guilty while Dave decides to plead guilty, Dave gets a jail sentence of one year while Henry gets five

years. If Henry pleads guilty while Dave pleads not guilty, Dave will get five years in jail while Henry gets one. If somehow both decide to plead guilty, both of them will end up with three years in jail each. In such a case, the best option is for both of them to cooperate and plead not guilty and get a jail term of two years. However, during the course of co-operation, one of them might get the idea that if he decides to plead guilty at the last minute, he might get the least jail term of one year while the other guy still pleads not guilty will get five years. Chances are that both of them would have thought about this and could end up pleading guilty which would ultimately give them a jail sentence of three years each.