Bakhtiar Rasheed 22100267

Chapter 9

To captivate audiences, game designers need to create better experiences to entertain them in the best possible way. These experiences occur in the minds of the humans and it is vital to gain more understanding of the human mind so that more exciting and ever-lasting experiences can be created in user's mental model of the game.There are four underlying mental abilities which, we can study, help make gameplay possible for the user : Modeling, focus, imagination and empathy.

Everything we experience, our mind makes a simpler mental model to help better understand the experience. The model is governed by a small set of simple rules and relationships that can be manipulated quite easily. For example, when we see an image with many objects in the scene, our brain tries to make lines to divide the picture in sections to understand the image. But when we read a comic or watch a cartoon, our brain needs to do less work because all the objects in the scene are marked and separated by lines already. This is why we find reading comics and watching cartoons more soothing than a real life documentary, for example. The important thing is that everything we experience, our mind makes a mental model of it. As a game designer, we want to better understand how that mental model is created in the first place, so that we can make our game experience more real to the player.

Our brain makes sense of the world around us by focusing only on a few selected things and ignoring others. For example, imagine we are in a room full of people and everyone is talking loudly but we somehow tune in to one specific sound and ignore all others. One of the main objectives when designing games is that our game should hold the player's focus for as long and intensely as possible. When something captures our attention for a long period of time, we seem to ignore the rest of the world and sense of time goes away, we enter in a state of sustained focus and enjoyment commonly referred to as *flow.* Being a game designer, it is our task to transport our user into this state of flow. To achieve this, we must do the following:

1. Clear goals: Our game should have a clear and simple set of rules to make players focus more.
2. Distraction-free: Minimal the amount of distractions, better the player can focus.
3. Feedback Loop: Every action needs to send a certain feedback to the user to prevent distraction.
4. Challenging: The experience needs to be challenging enough so that users do not feel boredom and not exceedingly challenging so that users do not quit the game in frustration.

We need to somehow navigate our player to the state of flow by avoiding frustration and boredom. This state of flow makes the player more engaged and enthusiastic in the game. If a player is playing Solo and is in a state of flow, it will most likely be silent and more focused on the game and if someone speaks to them, it will most likely ignore them at least for the first time. As a game designer, we need to monitor these experiences of flow and when a player exits this state, we need to determine what caused the player to lose focus so that this event of withdrawal of flow can be avoided the next time the player plays the game.

As we are all human beings, we have a natural sense of empathy, feeling what the others are feeling, imagining being in someone's else's place, and when making games, we do not need to think how the players will react to the game, we can simply experience what the players will feel by playing the character in the game ourselves.

There is also a hierarchy of human needs for motivation. If a person does not feel safe, he will not be motivated to pursue love, he pursues the feeling of shelter instead. Many game activities consist of achievement and skillset. If in an FPS shooter, if the player does not know how to fire a gun, how will it shoot a player? Therefore the player needs to first practice firing in Level 1 and then eventually to shoot. When a player is judged based on its performance in a game, and is provided feedback on its statistics, the player will feel a little insulted and will try his utmost best to improve this statistic in the next game. So as a game designer, we need to come up with better aspects of judgment and scoring.

Chapter 10

Game mechanics is the core aspect of a game, describing its aesthetics, gameplay and story. It is difficult to exhaust all kinds of game mechanics but some of them fall mainly into one of the following 6 categories:

1. **Space:** Defines the various places in the game and how they relate to one another, without all of the visuals and aesthetics. Some games like Tic-Tac-Toe are discrete zero/one dimensional space while a game of snooker is a continuous three dimensional space. In a game of trivia, there is no space, there are just people talking and therefore it can be considered a zero-dimensional space or it can also be referred to as a conversation space.
2. **Objects:** Every game has objects such as characters, props, tokens and each object has a certain set of attributes such as speed, position which also have their own states such as maxspeed, maxdistance.
3. **Actions:** Describe what the players can do in your game. There are two types of actions, generally operative actions, which are the base actions that a player can take such as jump, run, and resultant actions, which have to do with using the operational actions to achieve certain goals such as saving the queen from the pirates. Adding many operative actions to your game makes your game more interactive.
4. **Rules:** Every game has certain rules to make it interactive and fun to the player. These consist of basic rules of the game and how to play it. For a new player, these might be explained to the player in an interactive manner inside the game.
5. **Skills:** Every game requires players to increase their game skills. If a player's skill level matches the difficulty then the player will feel motivated to play the game. These consist of physical skills such as strength, dexterity, mental skills such as memory, and social skills such as reading an opponent, fooling an opponent.

6. **Chance:** Chance is very essential for a game to be fun because with chance comes uncertainty and uncertainty comes with surprises. There must be certain actions in your game which are marked with uncertainty so that the player's skill to predict the uncertainty is also rewarded.