

## Challenges in Cooperative Multiplayer Platformers

Have you ever had the experience of playing Super Mario 3D world with friends but ended with a more messy situation than the single-player mode? This situation can be frequently seen in platformers. It's not always true that the cooperative multiplayer platformers are designed to be more difficult than their single-player mode, but cooperative multiplayer platformers tend to create challenges for players in performing kinemes in chaotic and unrhythmed game scenes, a delayed or vanished anticipatory play towards the goal and a shifting horizon of intents in the game space.

Before getting into the main ideas, here is the definition of platformers. It is a genre under the action game category. As the word "platform" suggests, players control a character that can move across pre-built "platforms" through actions like running, jumping, or other combinations of actions. At the same time, other actions like pushing, and firing may also be designed in platformers to provide ways to overcome obstacles on the way towards victory. An example of a classic platformer is Super Mario Bros., where a player controls Mario to run and jump on various platforms, collecting coins, while dodging or jumping on the head of the monsters. Cooperative multiplayer platformers, compared with the single version, have added teammates, and possibly newly-add actions that teammates can interact with, as well as some slight changes in level design as the number of players grows in the game. As a result, the two most evident prominent characteristics of cooperative multiplayer platform games are the control of actions and cooperation among teammates.

In Kirkpatrick's point, the process of playing a game is "a sequence of moves on the controller that can be deployed when a certain kind of visual projected situation is encountered"(134). What the players need to play the game is the ability to perform "kinemes",

which is a terminology borrowed from dance, meaning “a group of movements with an associated meaning”. From the game's perspective, it is used to describe a sequence of button presses that makes meaningful moves on the screen to pursue the goal. However, the kinemes are harder to comprehend in cooperative multiplayer platformers than in their single-player mode due to the chaotic visuals from all the game objects and the distracting rhythms that they send out. Chaos is quite common in cooperative multiplayer platformers. With the existence of other players, cooperative multiplayer platformers produce visual chaos with more entities appearing on the screen and the visual effects created by their movements and interactions, making it difficult for players to make the correct move. In the cooperative mode of the game Cuphead, each player is supposed to control a cuphead to run, jump, and shoot to attack or dodge monsters on the way and finally kill the boss. The visuals of the game are quite dizzying since it includes two roles running on the platform with nearly no correlation in control, scattered bullets shots from both players and continuously popping monsters that are nearly proportional to the number of players as controlled by the algorithms. Under such chaotic visuals, it becomes more difficult for players to catch the visual presentation of the kinemes they play on the controllers, as many players tend to mistake the role they are controlling as their teammates, or just get lost in the overwhelming animations. Even if players are familiar with the incoming platforms, the emergence of monsters and their attack patterns, the kinemes are still hard to grasp when players jump into a discordant rhythm. Imagine if a player presses the jump button at one moment and the teammate presses the jump and rush button from a similar position in milliseconds afterward, what the player expected to see on the screen is the animation of landing in a particular beat. But what he received visually is that the teammate's character passed his role and landed in another rhythm. This situation is similar to the case in a dance where a dancer is performing a familiar

kineme. Before the choreography ends, another dancer exceeds him unexpectedly. It may probably raise doubts in the dancer's mind about whether the kineme is correctly performed. Likewise, this discordance that the player notices on the screen is challenging because a teammate's actions are not calculated in "the complex and rhythmic sequence" that holds in the player's brain(Kirkpatrick 135). As a result, chaotic and unrhythmic visuals in cooperative multiplayer platformers block the way for players to perfectly perform choreography on the screen, making it more challenging to play.

Other than applying kinemes on the hand with visual confusion, players in cooperative multiplayer platformers can be caught in a delayed or even temporary loss of anticipation towards the goal of the game as they get distracted by interaction with teammates. Anticipatory play is an important stage in pursuing goals in all kinds of games. It refers to the process of the player making choices or thinking of strategies for incoming challenges after they translate all rules and constraints into what they understand(Upton 75). In cooperative multiplayer platformers, it's almost impossible to neglect the existence of players. There are reasons for this from the game-building perspective. The angle of view in cooperative multiplayer platformers is often determined by all the players to make every role appear on the same screen. In the game Cuphead is the case, if two players' distance is too large, there is less sight that the front player can foresee the incoming situation. The process of "anticipatory play" is delayed as they need to wait for a while and focus on their teammates until the play condition is suitable for continuing anticipatory play. Furthermore, greater deviation from the original goal may happen through interaction with teammates which can lead to a loss of "anticipatory play". For example, Human Fall Flat is a puzzle-platform game where players need to reasonably use provided objects to flee away from the current scene under a life-like physics engine. When players are climbing the

cubes one after another, they may find amusement in using the grab button on their teammates. If the orientation is appropriate, they can lift the soft body of their teammates' roles and throw them off the cliff. This interaction doesn't have much to do with passing the platform. But the fun that players discovered with slapsticks with teammates indicates a loss of anticipatory play in heading towards the victory of the game.

Last but not least, teammates change the horizon of intent in a game space. As a result, players may have harder choices to make among all the horizons. The phrase horizon of intents refers to all the possible actions that players can do within the current point of the game(Upton 45). The existence of teammates can increase possible actions in the game. From a gameplay perspective, there will probably be newly added action between players to intensify the cooperation of the game, which enlarges the horizons at every moment compared to the single-player version. In addition, teammates' movements can often construct a players' understanding of the game or result in a change in dealing with the current situation, as Upton mentions "the horizon of intent can also shift as a result of the actions of other players"(58). This phenomenon is very common in the game Human Fall Flat. In the face of the current puzzle. For some game masters, they simply don't care about any given objects. What they need are just walls. In their horizon of intent, climbing walls is the priority. With their skills, they can climb everywhere as long as there are walls. While for some players who love thinking, they may prefer looking around and finding ingenious ways to use provided tools to solve the puzzle. When playing with teammates, the distinctive way of dealing with current situations among players can cause a change in the horizon of intents, like an added usage of a particular game object, a quick but technical-demanding method to pass, etc. Also, the horizon of intent may be reduced when the teammates throw some objects into the water that can't be retrieved at the

scene. With the horizon of intent shifting back and forth, players may face the challenge of choosing the things they will do at the current stage and whether they can successfully apply, as Uptain demonstrates “the complexity and variety of the external constraints generated by other human beings offers a far wider range of potential horizons, and it takes much longer for such a game to be played out” (45). In a nutshell, the difference among players changes the horizons which may potentially bring challenges to playing the game.

In conclusion, cooperative multiplayer platformers have the potential to create challenges through intricate kinemes with chaotic visual presentation, a deferred or lost anticipatory play and a fickle horizon of intent. While platformers are not the only genre that the cooperative multiplayer mode makes the game challenging, the analysis of how the existence of teammates impacts the aesthetic of games in aspects like visuals-audio-body interaction and the choices and anticipation of players, can be interesting to be extended to other genres of games.

## Works Cited

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