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Moon or Bust! Critical Introduction

I have always been a gamer at heart. From a young age I was obsessed with board games and video games alike, and the accumulation of old titles in our house cupboards are evidence of this. Puzzle games, fighting games, card games, strategy games-- I’ve dipped a toe into nearly every genre, indulging particularly in the games that fostered fantastical settings I could immerse myself in. When I was ten years old, I woke up at 5 am every day to play *Super Mario World* before school. When I was sixteen, I stayed up until 3 am to finish a massive, eight-hour game of *Diplomacy*. But I never just wanted to play these games-- I wanted to design for them as well. You know that you are truly engrossed in a title when that urge arises, usually at about the time you have finished what the base game has to offer and begin craving more. Finding the base media exhausted, you must create, or else wallow in dissatisfaction. With pen and paper, I plotted out expansive levels for *Super Mario World*, the bulky pages of which are still kept folded in the back of a closet somewhere. And while I haven’t designed anything for *Diplomacy* (that game is pretty perfect as is), in my teen years I drew up my own trading card game with a couple of friends, and plotted out more than a couple humorous dice-rolling board games to share with them. While it was rare that any of my creations would be played by others, there was something about the design process that felt incredibly rewarding and intimate, as if I had come to more deeply appreciate whatever medium I was invested in. With such a background, it only makes sense that I would be driven to further pursue game design, and given my career path towards the field of education, it makes even more sense that I would design an educational game. When first designing *Moon or Bust,* I thought to myself “I’d like to design a simple educational game. If others want to play it for fun too, that’s a bonus!” Little did I know how invested with the game mechanics I would soon become.

*Moon or Bust!* was almost an entirely different game. I had been kicking around the idea of a city-design game with a tile placement system for a while, and figured that it would be a good enough option for my first game. But, having actually played very few city-design games, the concept revealed itself to be quite flimsy once I actually began to write down the specifics of the rules. What’s more, I couldn’t figure out how to implement the educational aspects I wanted to, and mired over that for some time. The nail in the coffin was when a peer of mine said “oh, so you’re remaking *City Skylines?”* I didn’t want to re-make anything. I wanted my game to be my own. So I thought to myself, ‘well, what’s something I’ve researched that I’m passionate about?’ The first thing that came to mind was the Cold War, which has been the subject of multiple papers of mine through the years. From there, the progression to a Space Race political simulator was rather smooth, and I soon found myself flooded with concepts and ideas to bring together. Unlike my doomed city-game, I was invested in *Moon or Bust!*, and this set me up for success from the get-go. I think it is instrumental that all game designers (and educators) feel this way about the material they are producing. If you don’t enjoy what you’ve designed, it is most certain that nobody else will (Gee 2007), but if you bring enthusiasm to your craft it will be infectious.

Having settled on my subject matter, I began to define the educational aspects of my game. This proved to be trickier than I’d initially assumed. My first instinct, as someone who enjoys playing games quite a lot, was to incorporate elements that maximized the fun of the players but did not incorporate learning into the gameplay. While education and enjoyment are not antonyms, and in fact enjoyment seems to drive an interest in education as pointed out by Squire (2011), in my initial design these aspects seemed to push each other apart like repellant magnets. When I added a quiz element to my game, it slowed the turn-cycle to a crawl and increased the downtime of non-active players. When I added a time-limit to increase the stakes, this distracted from the historical relevance of the cards being played. There is a difference between educational games and games with educational applicability, and I was teetering from side to side on the line that separates them, unsure of what I’d like my game to be. Reinhardt (2019) defines the difference between these two types of games in his paper concerning language-learning games. Educational games are designed principally for use in a classroom, whilst games with applicability can be adapted to suit learning purposes but are more optimized for casual enjoyment. I needed to decide which of these types of games I wanted to create before moving forward.

 Eventually, I made the executive decision to streamline the game and maximize the involvement of the players. I thought to myself, ‘what good is it to design a game that is properly educational if the players aren’t enjoying it anyway?’ Enjoyment is a key aspect of game design that allows players to immerse themselves within the medium, and is credited with promoting an increased intimacy with and retention of gameplay. When players become so engrossed in a game that they forget the world outside of it, they enter a state of focus that most educators can only dream of achieving. This is known as ‘flow’ (Csikszentmihalyi 1990). The ability that enjoyable games have to foster this sort of focus grants them an incredible amount of utility. I reasoned that I would rather my game have a sense of ‘flow’ than have its educational aspects more glaringly defined, and so opted to minimize the quiz and discussion aspects of *Moon or Bust!* While the option to brief and debrief students who play the game is still encouraged, the educational goal of the game no longer detracts from the engagement of students, and this should promote stronger engagement and retention overall. I can remember all sorts or minutiae from *Super Mario* but struggle to remember classwork that I did not engage with last week, and I doubt that this is a minority experience.

I kept a few key principles of game design in mind whilst designing *Moon or Bust!* Gee (2007) and Boller & Kapp (2017) have written some excellent books on the subject of proper game design, to which I returned to routinely to consult. One of the most important aspects of good games that they outline, which I have mentioned already, is the promotion of player interactivity and lack of downtime. Not only is downtime a pet peeve of mine, it is proven to detract from player engagement and limit the ‘flow’ that game participants feel (Csikszentmihalyi 1990). Think about the last time you played a game and had your turn skipped for whatever reason. Sitting around and waiting as everyone else gets to go, with little to no agency in the meantime, is dreadfully boring. The entire purpose of my educational game was to involve students in a new and exciting way of studying history. If they had to sit through long periods where they did *not* get to do that, I would not have actually achieved that goal, no matter how involved they actually were when they actually took their turns. This is the primary reason why *Moon or Bust!* has simultaneous play. Because everyone is always engaging at the same time, nobody ever feels stagnant or excluded from what is going on, as should be the case in any good game.

Cycles of expertise were another thing that I kept in mind during my game design. Boller and Kapp (2017) explain that cycles of expertise are defined as multiple layers of intricacy which are gradually discovered by players as they continue to engage with the game. Cycles of expertise are important to good game design because they reinvigorate the players’ interest in the mechanics of the game and encourage them to reconsider their strategies multiple times. Take, for example, the nature of the Threat Levels in *Moon or Bust!* Threat levels increase over time, and function as an outside force capable of stopping the game if at any time a twenty-sided die rolls a number lower than them. When my playtesters first began their initial game, most of them had no idea how to properly evaluate or manage their threat levels, and so played the game without much care for them. What they soon came to understand was that, while it is unlikely that the die would roll a value less than their threat level in the early game, given enough rolls, it was statistically likely that such a thing would happen. The game ended when the die rolled a 4 and the threat level was 5. “That’s so unlucky!” one player exclaimed. “Well, we did roll the die fifteen times,” another said. “It was bound to happen sooner or later.” At the end of the session, the players concluded that if they were to play again, they would keep a closer eye on their threat levels and work harder to keep them at zero. This ‘re-learning’ of game strategy is just one example of the cycles of expertise that can bring players back to a game again and again, and promote engagement within a classroom.

Versatile problem-solving and game variability are two more aspects of game design outlined by Gee that I kept a close eye on while I worked on *Moon or Bust!* I mention these two aspects together because in my mind they are intertwined, and work in tandem to create a sort of ‘sandbox’ in which players are able to experience nuance and variety. Versatile problem-solving is, simply put, the ability to approach the challenges of a game in different ways. This is something that I, as a gamer, always look for when I am playing a new title. It is immensely rewarding to forge your own path towards a goal rather than following one that is predetermined, because in that sense the game experience becomes your own, personal experience. You want to kill a dragon? Don’t feel the need to use a sword-- use a bow, or magic, or cabbages if you like! Games such as *Skyrim* have remained popular for decades in part because they offer a lot of agency to players and encourage their creativity, and this creativity can certainly be applied to educational settings (Squire 2021). While I couldn’t factor cabbages into the game design of *Moon or Bust!* I wanted to ensure that players were presented with multiple options and tasks, which they could prioritize in whatever way they chose to. I limited only what I thought was necessary, and even encouraged the opposing teams to talk with and lie to one another because of the variety of circumstances this might promote. Game variability is similar to versatile problem-solving in that it spawns variance, but is different in that the game itself does this rather than the players. Originally, the event deck of *Moon or Bust!* Was always arranged in a chronological order, but I realized that the unpredictability of events increased the range of game outcomes dramatically and kept players on their toes. I kept an option for Historic Mode at the end of the rulebook that maintains the original order, but am more happy with using a shuffled deck in the base game. Again, this detracts somewhat from the more defined educational aspects of my game (I wanted students to memorize a timeline of the event cards) but I think that the variance opens the door for greater engagement.

*Moon or Bust!* Is first and foremost a game, and I wanted it to *feel* like a game rather than a lesson. There’s still plenty of opportunity to use it as an educational tool, but I have removed all of the harsh restrictions I initially imposed on the design in favor of promoting flow. This, I think, will promote the retention of lesson material more so than the more rigid version of the game would have done anyways, as in the ways alluded to by Csikszentmihalyi (1990). What’s more, it also makes the game more fun to play for those seeking casual enjoyment or a new sort of RPG. A few of my playtesters expressed interest in trying the game again at a later time, and I”m certain that if I’d included quiz elements into the game and forced them to memorize chronological events this would not have been the case.

So, is *Moon or Bust!* actually an educational game, or is it a game with educational applicability? I’d argue that depending on how you frame the game, it could be considered either. A highschool class studying Cold War politics could use this game as a political simulator to entrench themselves in the mindsets of the opposing USA and USSR forces, and discuss the outcome of their game and how it differed from history extensively. With such ‘wrapping,’ as mentioned by Zegal and Deterding (2017) it is still a very effective educational tool. At the same time, a casual play group could also play the game without any knowledge of the Cold War and have a fun time. Overall, I am very happy with my game in this regard-- I wanted to design something that could be educational, but that anybody could enjoy. While the game isn’t perfect, and still holds a few flaws due to my limited amount of experience, I am quite satisfied with the final product and hope to continue refining it over time.

Sources Consulted:

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