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Essay #1
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Zombie Attack!

For this assignment, I attempted to resurrect the family of ancient games called Hnefatafl (or Tablut, or just Tafl), played among the Vikings and later the Anglo-Saxons. These games were strategy based, but do not bear a direct resemblance to any games that are widely played today. There were apparently many variations on board size and number of pieces, but the rules that I started with (which were specifically for a game called “Tablut”) were fairly average for this set of games. My goal was to make this an enjoyable game without removing the complete dependence upon strategy. This took two major changes, one to balance the game, and one to make it more unpredictable and appealing to novices.

The rules of Tablut are outlined in Appendix A, and at first it seemed appealing because of its asymmetric novelty and because there were strategies that would not be widely known. I had someone to play with who enjoyed strategy games, and we sat down to uncover its mysteries. My optimistic hope was that winning with the king would require careful planning and utilization of his small force. However, some flaws quickly became apparent. The main problem is that it is extremely difficult for the attacker (the Muscovite player) to win. Any piece that he moves adjacent to the King in order to surround him can quickly be eliminated by a defender (a Swede) moving in behind it. After a few games, it became clear that the best strategy for the attacker was to patiently shift his pieces into a circular formation, and then close in. The term “absolute defense” was coined for this formation, although it was never actually achieved. The dynamics of the game usually devolved into the King pressing any openings he could find, and

the attacking army scrambling to cover each gap. The defenders of the King were used less and less, and the attackers often had very little choice in what moves he could make.

To my chagrin, the strategies for both players were rather defensive – the attacker did not rush in because he needed to preserve his ring, and the defenders did not attempt captures because their numbers disadvantage made losing pieces disastrous. It is difficult to pick up and play a game where the immediate goal is just positioning one's self for success – dramatic action is more appealing, especially to new players. Clearly, the mechanics of Tablut needed to be changed to make it both more exciting and more balanced.

For the second iteration of the game, which I will refer to as “Citadel” (Appendix B), I focused on changing core mechanics to make the game competitive. The ability of the king to capture was removed, so that the king depended on his other men for protection. In return, the king was allowed to escape through any edge square, so that his victory seemed constantly imminent. The board size and number of pieces was reduced, in the hope that games would be shorter, but to compensate, the king was placed on a special “throne” space on the central juncture that he had to step down from, preventing him from winning in two moves. Additionally, I let the players choose where they started their pieces from, within certain limits, so that they could form strategies even before movement began.

Citadel turned out to be much more balanced, and I was able to take the game to other people who play games but were not hard-core strategy buffs like my first partner. The mechanical changes were successful in that the attackers became more aggressive, but the King was still by far the most used piece, and whether the defender was winning or losing, he was usually moving the king *a lot* to either escape danger or press the advantage. Players using the defenders complained about all the pieces being the same, which affected them more because

they were short-handed. This also kept the game from being interesting to several people, and it was clear mechanics were not enough - better aesthetics were needed too.

As my main goal was to engage my play-testers, I decided instead to approach the design from the aesthetics side of the MDA system.¹ I re-examined the ideal dynamics of the game, and decided that they were 1) to pit a small number of important pieces against a large army of highly similar pieces, and 2) to have an asymmetric goal structure (i.e. escape vs. entrapment). One theme immediately came to mind as I thought of these two core principles: Zombie movies. In these movies, there is always a small group of people, each with at least briefly sketched out personalities, trying to escape a huge mass of homogenous ravenous dead. This coupling gave me a new mechanic – when the zombies (the attackers) captured a human, that human would become a zombie. This actually turned out to be a key change in the dynamics, because a defender was no longer invulnerable simply because he was standing in an escape route of the king. This allowed the zombies to attack fearlessly, as every assimilation represented a two-piece swing in momentum and no longer opened lanes for the King piece.

I also got a cast of characters from the stereotypical personalities in these films, and I tuned them so their abilities would be sufficiently unique but also not useless or overpowering. You can read the rules of *Zombie Attack* (Appendix C) for full descriptions, but they were reduced to 1) a weak old professor who can save the human race if the other characters help him escape, 2) a hero with a bike who can help the other characters escape quickly, 3) a heroine with a torch who can push her way through the zombie hoards, 4) a war veteran who can blow up zombies and sacrifice himself for the greater good, 5) the professor's loyal dog who is always protecting him, and a few "extras" who have no particular skills but could always end up being

unexpectedly useful. If these characters sound familiar or at least intriguing, then I have partially succeeded already.

This new aesthetic added elements of fantasy and narrative to the game, making it more fun to explain and making it easier for people to grasp. The mechanics and formal rules became significantly more complicated, but that has led to more exciting game-play, because future moves are now much harder to predict. An unexpected side effect of the new pieces was that in a sense I lost intuition for the constitutive rules.² When first playing Tablut, although I would lose as the Muscovites (nobody ever won as the Muscovites) it only took a game or two to gather the general strategy for both sides. The choices still seemed obvious in the Citadel phase, but when playing *Zombie Attack*, I lost consecutive games, playing as the two different sides, because my opponent realized new strategies that I had not even considered when making the new rules. In fact, it seems that in *Zombie Attack*, the humans have multiple paths to victory, and that player can win using many different subsets of the four special pieces. An unbeatable strategy may emerge if the game is played enough times, but as of right now no one character looks unstoppable or useless.

A few more rounds of tuning were essential, because the new characters had introduced some unforeseen conflicts and ambiguous situations. The rules were not written down at this point, and although I had a good idea of what I wanted, the rules were not sufficiently explicit.³ Without this condition, more than one test session ended in an argument over how a piece should be able to move, because my testers did not consider the rules to be *binding*. An interesting lesson about iterative design that I took away from this experience: if those who are playing the game know that they are testing it, or that the rules are not set in stone, the “magic circle⁴” of the game is broken. Everyone who plays games has their own ideas about game design, and if you

don't want to solicit input on how a game could be better, you had better make your design appear completely solid.

In the end, I felt that I was successful in making *Zombie Attack* an engaging, entertaining, and balanced game that didn't compromise its ancient heritage too much. However, I attribute much of this to being lucky that the traditions of zombie movies lent themselves so well to game dynamics. Everything else, I have to attribute to my testers, who were responsible for convincing me that the game still wasn't fun enough, no matter how many times I changed it.

¹ Hunicke, Robin, et. al. "*MDA: A Formal Approach to Game Design and Game Research.*" Pg. 2
² Salen, Katie and Eric Zimmerman. *Rules of Play*. Cambridge: The MIT Press, 2004. pg. 132
³ *Rules of Play*. Pg.122-123.
⁴ *Rules of Play*. Pg. 96.

Appendix A – Rules for Tablut

- Tablut is a game for two players. One player plays as the “Muscovites,” and the other plays as the “Swedes.”
- The game starts with the pieces arranged as shown in the following picture, the 8 Swedes and their King occupy the center of the board, while the 16 Muscovites are along the edges of the board.
- Every piece moves like a rook in chess.
- When a Muscovite moves adjacent to a Swede that already has a Muscovite on the opposite side, the Swede is captured. Swedes can capture Muscovites in exactly the same way.
- The Swedes win when the King makes it to one of the clear squares on the edge of the board (the squares that the Muscovites start on are referred to as “the realm of the Muscovites” and it is unclear whether the King could escape through them).
- The Muscovites win when they place four Muscovites on the four squares surrounding the King.

Image removed due to copyright restrictions. Please see http://en.wikipedia.org/wiki/Image:Tablut_board_pieces.png

Figure 1 – The Tablut Board

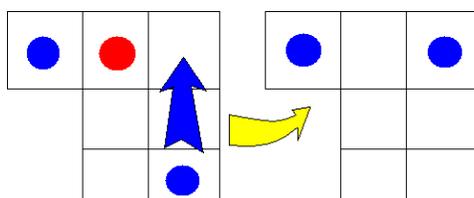


Figure 2 - A Capture

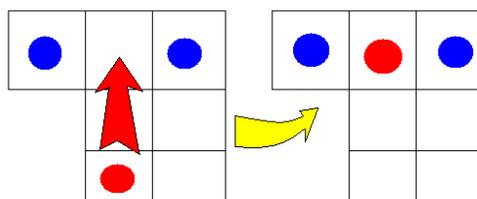


Figure 3 - Not a Capture

Appendix B – Rule changes for “Citadel”

- The board is 8x8, whereas it was 9x9 in Tablut.
- There is one King, 6 Defenders, and 12 Attackers. The Defender starts with four pieces on the middle squares, the Attacker chooses where to place his 12 pieces (along the edge of the board), and then the Defender may choose where to place his last 2 pieces.
- The King starts on a special space on the central juncture, hereafter referred to as the citadel. He must spend a turn to step onto an adjacent square before he can move like a rook.
- The King can no longer be one of the two pieces used to capture another piece.
- The King may escape by making it to any square on the edge of the board.

Appendix C – Full Rules for **Zombie Attack**

- This game is for two players. One player plays as the humans, and one player plays as the zombies. The humans are trapped in the lab of the brilliant Professor Romero, and must help the professor to escape, for he is the only one who knows how to destroy the zombie hoard and save the human race.

Objective

- For the humans, the objective is to get the Professor to any square on the edge of the board.
- For the zombies, the objective is to either surround the Professor on all four sides, or to kill all the other humans.

Setup

The game is played on an 8x8 board with the corners removed, and with a special space called the Chamber on the central junction of the board.

The professor is placed in the Chamber, and Sasha, Jack, Chuck, and Rex are placed by the human player on the four squares around the chamber.

The zombie player may then place 14 zombies along the outer edges of the board wherever he so chooses.

The human player then places his three Extras. They can be placed anywhere, so long as they are each adjacent to another human piece (this means multiple Extras can be placed as an island, separate from the characters in the middle).

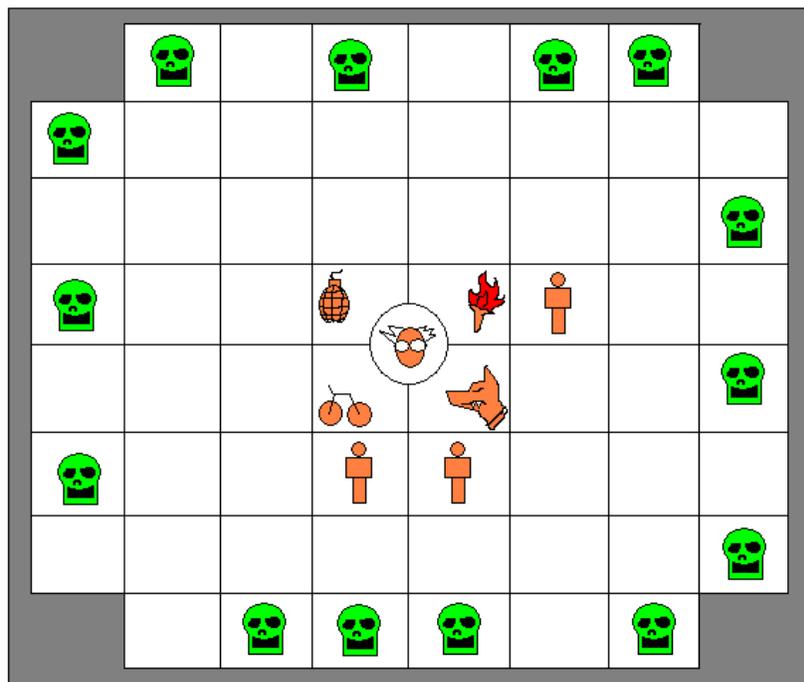


Figure 4 – a possible starting position in Zombie Attack

Playing the Game

The players take turns moving one piece at a time, starting with the zombie player. No single piece may be moved by the player on consecutive turns, unless that piece was “moved” by another piece or the piece is the professor and he escapes on the second turn.

Movement

- The characters have limited energy, so no piece may be moved twice on two consecutive turns, except for the professor when he has a free path to salvation on the second turn. A piece may also be moved after they have been moved by a *different piece* (i.e. Sasha or Jack).
- Some humans have special movement patterns, but unless otherwise noted, they move like rooks in chess (i.e. in one orthogonal direction, over as many open squares as they wish). The zombies follow the same movement pattern as a normal human.

Standard Capture

- A capture occurs when a piece is moved so that it is adjacent to an enemy piece, and there is already a friendly piece on the other side of that enemy piece. No capture occurs if a piece intentionally moves between two enemy pieces. There are some exceptions to how certain human pieces capture or may be captured, and these are noted in their individual descriptions.
- In the event of two humans capturing a zombie, the zombie is killed and removed from the board.
- In the event of two zombies capturing a human, the human is transformed into a zombie. Remove the human from the board and place a zombie piece where they were.

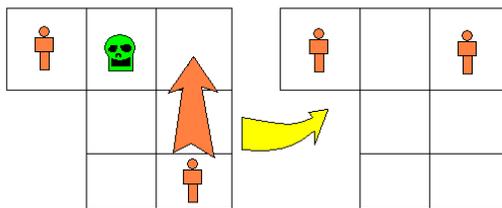


Figure 5 – a Human Capture

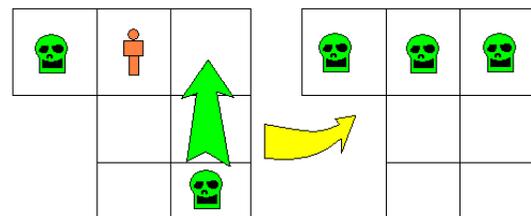


Figure 6 – a Zombie Capture

Characters (and their symbols)

- **Professor Romero (Old Man with Glasses)** is an old, fragile man, who may be the only person alive who know how to stop all the zombies. He is quite sickly and paranoid, so he travels in a radiation suit. This means that zombies have to surround him on all sides to subdue him, but it also means he is next to useless for killing zombies. The Professor can only be involved in a capture if the other piece involved is his dog, Rex. The professor starts on the central junction of the board, which is his hyperbaric sleeping chamber. Before he can move normally, the professor must exit this space onto one of the four adjacent spaces. Once he has left the chamber, he may not re-enter it.

- **Sasha (Torch)** is one of the professor’s lab assistants. When the zombies attacked, she found all available sources of fire and she’s not going to let anybody else have any. Because the zombies fear fire, Sasha can “push” one zombie when she moves, for as many spaces as she

wants. Sasha does not have to be adjacent to the zombie when she starts moving, but she must move an open space at the end of her path where the zombie will end up (this can be between her and another human, in which case it counts as a capture).

- **Jack (Bicycle)** is an unlucky messenger with a bike who happened to be in the wrong place at the wrong time. He moves normally, like a rook, but he may also bring any adjacent human with him. No matter what side of Jack this person starts on, they finish on the space behind him (on the line that he moved along) when he is done.

- **Chuck the Janitor, aka Sgt. McKillian (Grenade)**, is a war veteran who still has many skills with incendiary devices. Any time he leaves a space, Chuck may choose to leave behind an explosive trap for those zombie bastards. Any zombie that lands on or passes over this space will cause the trap to explode, killing everything in a one-square (including diagonals) radius. Chuck may also choose to commit suicide *instead* of moving, blowing himself and everything in a one-square radius to pieces. If Chuck is “captured”, instead of becoming a zombie, he automatically commits explosive suicide. The only piece that is not killed by Chuck’s pyrotechnics is the professor because of his protective suit.

- **Rex (Dog)**, the professor’s dog, is a loyal German Shepherd. He is fierce and nimble, so he can move diagonally as well as orthogonally. However, he will not leave his master, so any move he makes must end with him within a two-square (including diagonals) radius of his master. Note, this means the professor may move away from Rex, but the next time Rex moves, he must end up close to his master again. Rex may NOT be moved away from the professor by Jack if that move will take him out of the two-square radius.

- The Extras are three other lab assistants who have no special fighting capabilities. Usually you forget about these guys, but you never know when one of those characters you thought was unimportant is going to save your life.

Playing Fair

If two players want to play quickly, they may simply choose sides and play one match. However, if they want to be completely fair, they may play two matches, switching sides between them. In this case, ties can be broken in the following manner:

If the zombies win both times, whichever player ended up with more zombies is the winner.

If the humans win both times, whichever player escaped faster after the professor left his hyperbaric chamber is declared the winner.