Alexander Svanholm (201708174)
Anne Gregersen (201505799)
Frederik Ditlev (201706487)

Aarhus University
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Total characters w/ spaces: 18.933

Escape Room

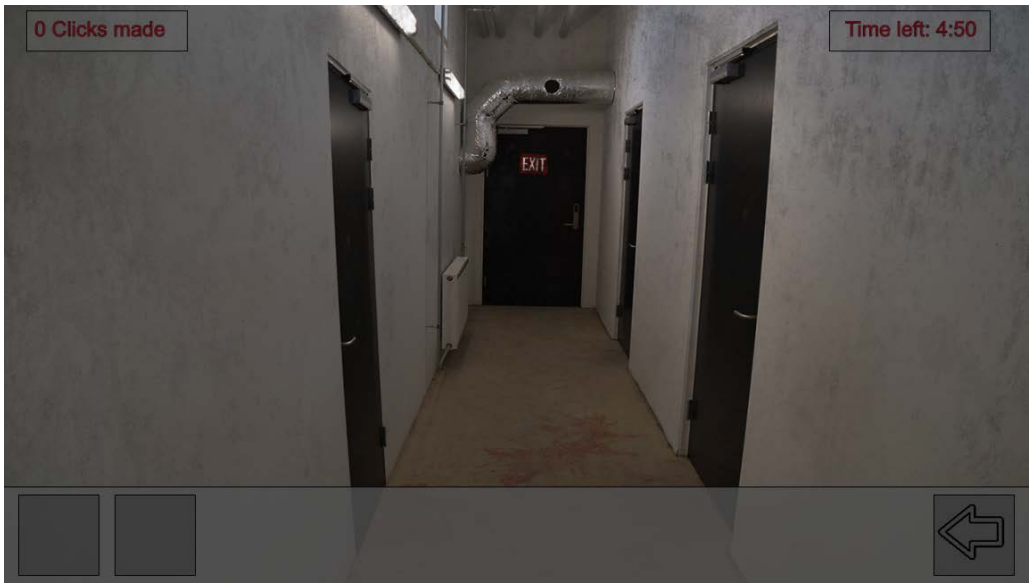
by A_2F Interactive (Alexander Svanholm, Anne Gregersen, & Frederik Ditlev)

Click here to play the game.

You wake up in darkness. You don't remember how you got there… Somewhere, something is dripping. Maybe it's water… You hope it's water. A light flickers on and you can see now. You are in a hallway with four doors. There are strange, red stains on the floor. You have to get out, but the exit is locked. Whoever put you in here might be back at any moment. You are scared. You are running out of time. You have to escape the room.

- *Escape Room* opening crawl.

In *Escape Room*, you are faced with the challenge of escaping a dark and grim hallway. Before getting to this point, you were supplied with a clue stating that "the exit key is in the Storage Room." Using this information, you must explore the different rooms, and solve puzzles and riddles, all going towards the end goal: escaping the room.



The program itself is both rather complex and simple. The code itself can be daunting to read, as there are many lines and values to try to make sense of. However, the crux of the program is simple. It can be boiled down to a single word: escape. The way the program accomplishes this is to set up multiple conditional statements, constantly asking questions about where the player currently is, what information they are in possession of, and what items they have acquired. The overall question of the program can be stated as being "do you have the key for the exit door?," which is also the main conditional statement found in the program. It is this one question, this single function, stopping the player from achieving the win state that is controlled by a boolean expression.

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Escape Rooms and Spoilers

The concept of escape rooms originated from video games published back in the 1980s. Since then, escape rooms have become very popular, both in a physical and in a digital way. Not so many years ago, real-life escape rooms started appearing across the world.

But what is an "Escape Room" really? As mentioned before, they exist both in video games and in our own reality as well, and they're built upon the same set of rules. The player, or set of players, as is often the case with physical escape rooms, are put into a room where they must explore the environment to find hints and clues in order to escape within a given time frame, often in an already established context of consequence should they fail to "escape" within the time provided.

The only way out is through a locked door. The players may find containers that require passcodes to be opened or locks that require keys to be unlocked, however the main part of the concept of escape rooms is that it's *not* supposed to be easy. Puzzles, riddles and other similar tasks play a key role in escape rooms. The solution to one puzzle might lead to a helpful answer, however it may also be a red herring. If the players, within a specified time frame, are able to figure out passcodes, open locks, find hidden items, and solve complicated riddles in between, they may ultimately be able to free themselves.

The major part of participating in and completing these escape rooms relies on the enjoyment found in solving puzzles and piecing together riddles. Exploring the area, finding unanswered questions and the potential solutions for them, is most of the experience. Taking that away removes much of the fun otherwise gained from participating in the escape room. Being told the answer, or being spoiled of figuring out the solution yourself, might feel more like failing than receiving help.

Merriam-Webster defines a *spoiler* as someone or something that spoils; this referring to the act of damaging, destroying, or ruining something. In relation to modern society's context of the word, a spoiler is something that ruins an experience instead of an object by giving or supplying information not yet acquired in the context of the media they are interacting with (Cohen). A good example would be one of the most well-known spoilers of all time; the reveal of Darth Vader being Luke's father in the movie *Star Wars Episode V: The Empire Strikes Back* (1980). This can, undoubtedly, be considered a spoiler for anyone who has not

seen the movies, and the reveal of this fact outside of the context of the story can seriously diminish the enjoyment of the whole franchise.

Given the well of information one can easily acquire now, the danger of being exposed to spoilers is growing. One simple search on Wikipedia can end up revealing the plot twist of an otherwise intriguing story, and it can do it in just one line of text (ibid.). To some, this reveal can ruin the experience of the specific media in question, as a potentially large portion of the enjoyment of the media - the solving of the mystery - has already been unveiled. Jonathan D. Leavitt and Nicholas J. S. Christenfeld state in a 2011 study that "the enjoyment of fiction through books, television, and movies may depend, in part, on the psychological experience of suspense" (Leavitt and Christenfeld 1152). What this means, is that the tension felt by not knowing everything about the media being explored (in this case fiction) is a large part of the experience.

The 2011 study conducted by Leavitt and Christenfeld, set out to explore this idea of spoilers potentially lessening the enjoyment of media. In the study, around 800 California university students were tasked with reading different stories, all containing various twists and mysteries, and some being literary stories (ibid. 1152). The conductors of the study would reveal key parts of the stories to some of the participants of the study to see whether the provided spoilers would either diminish or improve their reading experience. The end results show a definite preference towards the spoiled stories over the unspoiled ones, a result which was universal across all three types of written work used in the study (fig 1).

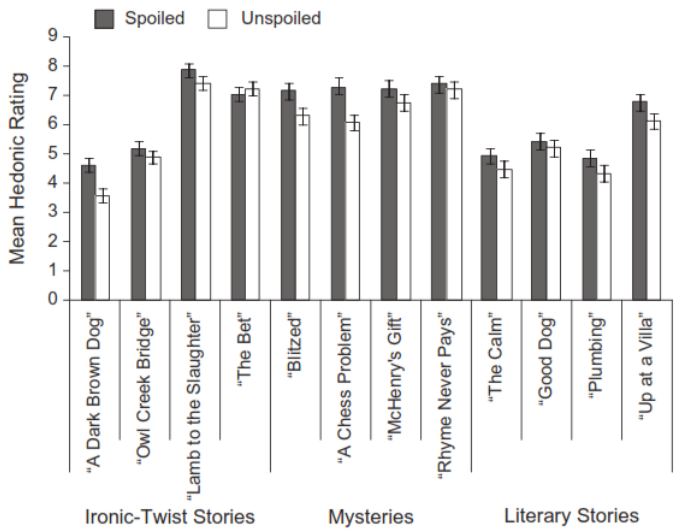

Fig. 1. Hedonic ratings of the individual spoiled and unspoiled stories. Error bars represent standard errors.

Leavitt and Christenfeld conclude the study by speculating that effectively spoiling parts of the media, gives the readers the possibility to anticipate certain happenings in the given works, and solve uncertainties and confusions as they are met in the text, and will actually help increase the aforementioned tension and thereby enhance the enjoyment of studying the work (ibid. 1153).

Why a Video Game?

With this project, we aimed to, first and foremost, create an enjoying experience. Something you could play, interact, and have fun with. In other words, we wanted to make a video game.

The decision for this came from a shared interest among the group concerning games, as well as the entertainment value games in general represent. Games can serve as a lens into an alternate reality. A different world filled with monsters, challenges, and heroes. In our case, we sought to combine the atmosphere found in the horror genre with the satisfying idea of solving puzzles and riddles. Escape rooms fit into both categories. There is a definite sense of dread that exists when attempting to complete an escape room, as sounds and music will seek to throw you off course. That, in conjunction with the fact that you know you are running out of time, can cause the user to become anxious because of it.

But the idea of fun through logic is not lost, despite the rather dreary atmosphere and knowledge of potential failure. Solving puzzles and riddles gives a unique satisfaction. As stated by Olga Goriunova in the introductory piece of the book *Fun and Software: Exploring Pleasure, Paradox and Pain in Computing* from 2014, “humor here is indicative of the pleasure of breakthrough, of thought experimentation, of unconstrained and purposeless but intense and curious and materially specific enquiry” (Goriunova 2). In the context of this quote, Goriunova is referring to literary works attempting to put a spin of humor and fun onto topics such as math and physics, but the point remains the same. It is not the act of knowing, but instead the act of figuring out the problem that is the real fun, a theme constant throughout our program. If you are unable to figure out the solution to the puzzles presented, you lose. If you take too long, you lose. The game becomes all about escaping and since the method of doing so is solving riddles and exploring strange rooms, the player becomes extremely motivated to do so as this is the only way to progress.

Multiple methods were applied to motivate the player to engage with the program. A timer and click-counter were implemented, both to show the player the progress they were making as they advanced through the game, but also to communicate how much time they had left. Knowing you only have minutes to escape increases the sense of dread we wanted to be present in the game.

This “dread” was an important facet of the program. In horror games, the dreary atmosphere and the fear of the unknown is what motivates you to continue forward. The fact that the

player has to explore rooms painted with red stains of unknown origin, while accompanied by the constant hum of frightening music, makes the simple act of going from room to room an intensely creepy experience (King 7).

Some will say that this is not fun, but scary. That this way of immersion frightens you more than it intrigues, which is a valid observation. The reason for the theme of horror being as prevalent in this program as it is, is partially to enforce the idea of escaping. As mentioned before, escape rooms often have a little piece of backstory motivating the participants of the activity to want to escape, and putting the player character in a potentially dangerous situation enforces this basic idea of "escape". If the room looked pleasant and cozy, you would have no real reason to leave, and you wouldn't be as motivated in your attempts at getting out. There is also the sense of relief at succeeding in a frightening situation, even if you don't know the consequences of failure. In fact, this elevates the experience, as the player's imagination fills in the blanks of the story, creating a scenario much more frightening than anything the developers could have come up with (Ibid 10). Whenever the player makes progress, it takes them further away from this terrible fate they have made up in their heads. There is an immense satisfaction to be found here. The sense of relief felt at being closer to the "win" state common to all video games (Flanagan 7), as well solving the riddles laid out for the player. The game becomes a sort of "intelligence test," made to be a game of puzzles and riddles, trying the intellect of the player in question (Goriunova 3).

In the relation of spoilers, this notion of fun, discovery, and logical assessment persists. In games, you are often given helpful hints, or a description of what you are able or unable to do. This reveals some of the possibilities within the game, allowing the user to gain an understanding of their capabilities before they start the game. They can figure out if this is something they are interested in, as well as save themselves from wasting time trying to do things that are not possible. In this game, the player is supplied with the information "the exit key is in the storage room" on the menu screen, technically revealing the solution to the game. The player knows where to find the tool that will allow them to escape, but will quickly find out that there is a bit more to the game than just going to the storage room and picking up the key. This bit of information serves as a good starting point. It gives the player a focus, a thread to chase. They are not wandering aimlessly, but instead with a purpose. By supplying the player with this information, this hint, which could be considered a spoiler as it was given to the player without their consent or reason as to why they would know of this

fact, can help increase the tension of the situation, much like it was concluded in the aforementioned study (Leavitt and Christenfeld 1153).

One could also go the opposite route, saying that in a game that is about exploring and discovering, the player has been robbed of a section of the full experience. It could take away from the feeling of fun felt from solving the puzzles present in the game if the player feels they were playing the game with training wheels, using information they had not earned or gained on their own. To some, especially those already familiar with escape rooms and how they work, this would most likely be the case, but for others who are not as aware of this type of game, this information could serve as assistance, much like online tutorials and walkthroughs can help a layman understand the more complex parts of programs or games.

The Program and the Code

Conditional statements are an ideal way for creating an escape room, as the code goes through the same questions that the player is asking themselves. The player knows they need to find the exit key, the program asks if they have it. The player knows they need to solve a riddle, the program asks if they have solved it. By asking "if," the program is constantly checking what information the player has, just as the player is doing in their own minds. Continuously going through all the information they have acquired so far and applying it to the situation at hand.

Another relation between the code and the user, is the experience and knowledge the user has about code. If the user knows and understands code, they would be able to go into the program files and figure out the solution to the game, thereby cheating their way to a win state. In this case, the conditional statements show their weakness, as they have no way of checking the method with which the player gained the information they now possess. Since solving the main riddle is something that occurs outside of the boundaries of the game, it is not possible for the code to assess how far along the player is in solving the riddle. It can merely ask if the player has the right answer, and it expects a yes or no response.

The condition clause of the if-statement is a logical expression that potentially evaluates to either true or false. These expressions are known as boolean expressions. Computational logic works with these expressions to find solutions to designated problems or inquiries. People, however, do not function in exactly the same way. People can transition between opinions or be undecided on a particular problem, whereas a program has been conditioned to

respond in certain ways. In our program, the code constantly checks what information the player has. This is visualized in the inventory screen, where the player can easily see what information the program knows they currently possess. Something that could not be coded or visualized is the solving of the riddle found in the radiator room. The solution to this riddle can not be found anywhere in the game as it runs, and the player must use logic to deduct their way to a solution. The boolean state of moving from true to false, from gaining new information that had been hidden until that point and acting on it, is a condition found all throughout coding. Boolean statements are based on clear rules, whereas people can act based on other factors, such as desires, needs, and wants. These conditions apply to different circumstances, as the emotional reactions from a human cannot truly be found in coding. A person is either able to expect a vague, unsatisfying, or false answer or one that is sufficient, satisfactory, and true. A computer will ask a question and expects only the answer to be either true or false. Different conditions apply for each, as different situations exist for these two kinds of processes.

Depending on how reliable and understandable a piece of code is, the syntax of conditional statements can, in some cases, be used in relation to spoilers. But within this way of thinking lies an uncertainty. You won't actually know if a found key works on the door before you try it out yourself. There is a progression of experimentation here. Conditional statements imply connection, and, in that sense, logic. In the program, solving the riddle is a process of combining clues and connecting them into a final result. Should we take this situation into a real world context, the same process occurs. Finding the connection and similarities in the given clues and piecing them together. It's a logical progression, a progression which is likewise found in the conditional statements within the program. Connection, progression, conclusion. If part of this connection is "skipped," perhaps by revealing information that was not supposed to be revealed quite yet, the desired rhythm, or progression, set up by the conditional statements could be ruined.

The flowchart attached (see Appendix A) shows how an ideal approach to the game looks like. Since the game requires exploration and interaction beyond the boundaries of the game (such as when solving the riddle) the flowchart depicts the most direct route to a win state, not all possible outcomes, since this would be more confusing than helpful to a non-technical reader. By choosing this approach, we have pinned down the route to escape without revealing all the answers to the observer.

Conclusion

Whether spoilers would either diminish or improve someone's experience with a certain media, is highly determined by which context or work the spoiler appears in and who the receiver is. According to Leavitt and Christenfeld, prophesying certain parts within a given media is a good thing as it gives the readers the possibility to solve confusions and unpredictabilities as they occur. Quite on the contrary, not knowing a part of the media beforehand is also a large part of the experience. Thus, the right idea of spoilers highly depends on the type of work and who the receiver of the spoiler is.

The game is built up of conditional statements and boolean expressions, and in order for the program to function, a link between all expressions has to be present. The conditional statements continuously check what information the player has acquired since the game was started. The boolean expressions change the values when a conditional statement has been met.

Escape Room set out to investigate the potential frustrations felt by the player when a game, whose main purpose is to find clues and solve riddles, gives you the solution up front with little to no input from the user, potentially robbing them of a fun experience. However, the program fools the user. It merely acts as if it is giving them the answers, where in reality it is guiding them along a path where they will have to explore their surroundings to find the exit. The program can be seen as a confidence trickster trying to break with the issue of spoilers. Thus, the opening is going to make the user believe the solution has already been given to them, when, in reality, they are only just getting started.

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Appendix A