IRREVOCABILITY IN GAMES

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Abstract

This report examines the history and future application of irrevocability in video games. Decision making is an essential part of playing video games and irrevocability negates replayability by disallowing alternate decisions. We found that successful games with this theme exhibit irreversibility in both story and game mechanics. Future games looking to use irrevocability well must create an ownership that the player feels towards the experience by balancing these two mechanics.

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Part One: Concept of Irrevocability

Introduction

Irrevocability is defined by the New Oxford American Dictionary as something that is "not able to be changed, reversed, or recovered; final" (*New Oxford American Dictionary*). Games with irrevocability, therefore, would be games where the choices made during play would be the final set of choices presented to the player; they could no longer replay the game for another experience.

This idea of fleeting memory and singular play predates the inception of digital games. Life, itself, is a singular play system of fleeting memory. Each person only gets one chance at their life; there are no resets or save points. Irrevocability in digital games, in essence, is an attempt to capture life in a game through a mechanic such as permanent death. There are few games that implement permanent death because games are a form of escapism for players — players do not want to be constricted by the rules of life.

Instead, games offer saving methods so that gamers may retry a failed course of action or attempt something different. These mechanics are a stark contrast to irrevocability; players are able to repeat a scene, change an outcome, or replay the entire game. While the majority of saving in video games is implemented as previously described, there are some implementations which are irrevocable. Saving can be seen as a form of memory: the game picks up where the player last remembers it being, and he can continue forward from there. From a computer standpoint, this is a literal interpretation. Saving a game stores the game state to the computer's memory for later recall. Older systems, which had little or no available memory, did not support saving. This meant that playthroughs were irrevocable – when the

game ended or was shut off, the gamer would never again be able to fully recreate his play. Every game of *Pac-Man*, *Donkey Kong*, and *Space Invaders* was unique because of this hardware limitation.

Newer games which have access to newer hardware don't have these restrictions. Games such as *Skyrim* have near-infinite save slots. *Bioshock* has "vita-chambers" which will revive a player without penalty upon his character's death. Irrevocability in these games does not exist. Is it possible to have an irrevocable game on a system that supports near-infinite saves? Couple this system with the resources of the internet, and no distributable game can be fully irrevocable.

There are two implementations of irrevocability in digital games: gameplay and story. Certain games choose to incorporate both aspects – a delicate balance is essential to be truly irrevocable.

Storied irrevocability allows game designers to incorporate more of the aspects of real life into their game. This may involve decisions that impact future options, the ability to save, or game erasing when the story calls for the ultimate sacrifice. These methods can bind the irrevocability closer to the game's story as opposed to introducing it as a gimmick.

Alternatively, gameplay irrevocability allows for replayability through different experiences – each instance of play is a brand-new experience. Games such as *Rogue* or *Minecraft* have irrevocability in a single playthrough. Death means the end of the that particular playthrough, but there is nothing to prevent the player from hitting reset and starting over from the beginning. These games stress their replayability as a game feature, with each and every playthrough being a unique gameplay experience, unable to be wholly recreated. Gameplay is an irrevocable instance with these games – they can never be experienced the same way again, much like a sporting event or a concert.

Most games opt to mix the two different types of irrevocability to give the player an interesting mechanic while still being able to explain its purpose in the story. *Enemy Zero* for the Sega Saturn had a

game mechanic in which saves were stored on a voice recorder at a cost to the in-game device. Restoring saves also had a cost to an in-game battery, which meant that at a certain point the player would run out of battery to save and reload and would be forced to restart the game if they got stuck. This explained the game mechanic through the story and gave it a purpose. The difference between using both implementations of irrevocability and using just story is that a story application is irrevocability placed in the game purely for the narrative, such as *Nier*'s character sacrifice at the end of the game, which deletes all of the player's save files.

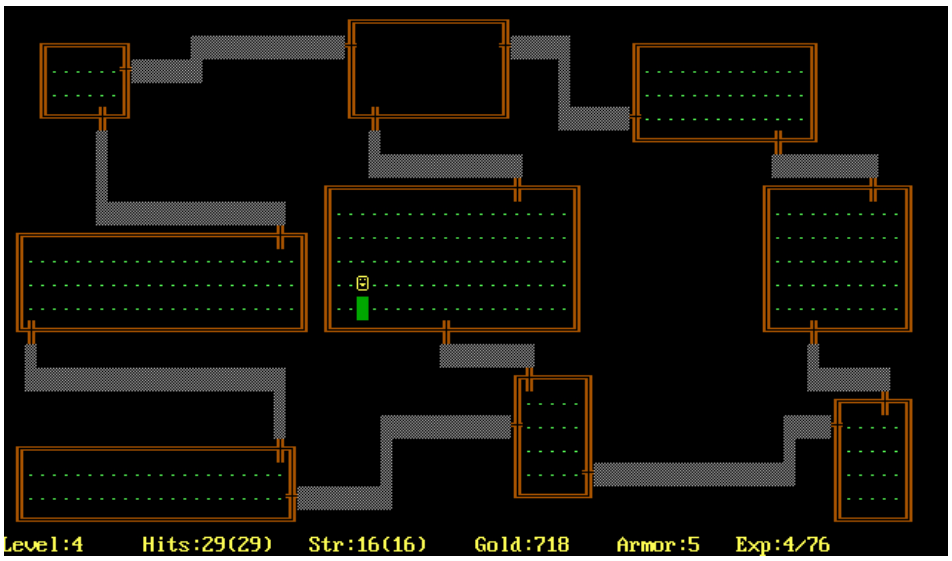
For a digital game to successfully and completely utilize irrevocability it must maintain a balance between the ephemeral aspects of gameplay and story. The unique experience the gameplay provides must give the player a feeling of ownership over the events of the story.

In the following pages different video games and their implementations of irrevocability will be described. Each game's take on irrevocability will be inspected for its impact on games that have come out since and may be released in the future.

Part Two: Chronology of Irrevocability

***Rogue* - 1980**

The history of irrevocability in digital games begins with a game so iconic that modern games following its mechanics are named for it. The game in question is *Rogue*, and its descendants are called



"Roguelikes." *Rogue* was developed in 1980 by Michael Toy and Glenn Wichman, and was one of the first games to use a graphical interface in the form of letters and characters in command line output. For the time, saving was not an option, so death was permanent. Failing the game at any time meant restarting from the beginning. But unlike other games, which were a single experience to be replayed, every time a player started *Rogue*, they were presented with a newly generated dungeon.

While the definition of Roguelike is not entirely agreed upon, the most important aspect that a game should follow, and the one it and *Rogue* are most known for, is this random generation of dungeons. To the creators, this meant that every player – themselves included – would be greeted by a new surprise and challenge at every new game. It was this, along with permanent death ("permadeath") that ensured that every play was irrevocable. Only by beating impossible odds could the same dungeon be created twice, so any death meant that other options would be lost forever. It fits the definition of irrevocability exactly, as no choice can be taken back or tried again.

Permadeath is not the necessary aspect of *Rogue*'s irrevocable nature, but it does add to it. The fact that every decision matters, and cannot simply be repeated for the desired effect adds tension. For this reason, in the interest of having a unique experience every time, permadeath is another staple of most Roguelikes. In recent examples, Roguelikes are one of the few classes of games that contain permadeath.

Wizardry **- 1981**

Wizardry followed *Rogue*'s example as an RPG that took place entirely in a dungeon. It was the first party-based (the player controls not one character, but a group similar to one in Dungeons and Dragons) video game. It did not feature generated dungeons, making it more like traditional games, where every detail is crafted by developers and unchanging. However, it still ensured that no player would have quite the same experience, or be able to repeat previous ones, using permadeath.

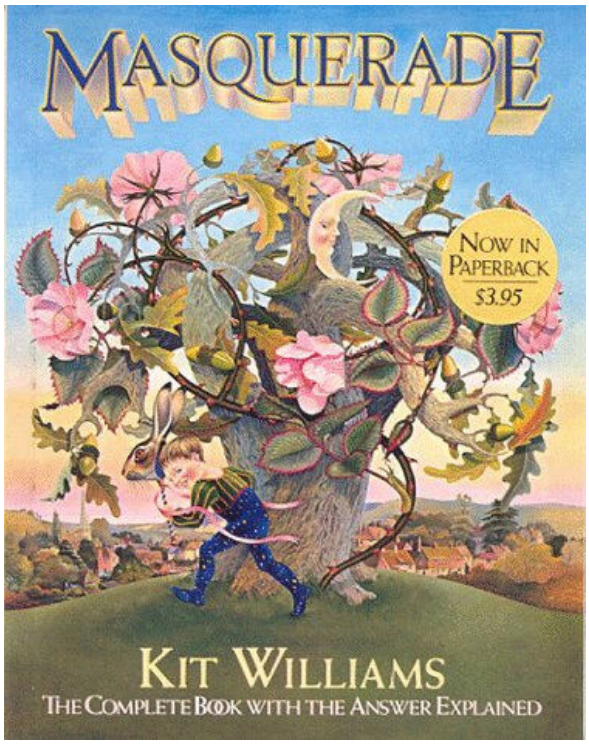
In *Wizardry*, the player's party can become lost in the maze-like dungeons. If every member died in an encounter with a monster, the party was lost, but this was not the end. A new party could be created to rescue the last one, but losing this new party meant the old one was gone for good. The significance of this mechanic is that it is more relevant to the story than the gameplay. One player might have to frequently sent out expeditions to save parties, and switch characters in and out frequently, whereas another player may complete the entire game with a single party.

This emphasis on weaving a single story continued, as the next few installments in the series required a party who had completed the previous games. The *Wizardry* series continues as of 2012, with another installment due this year.

Many games of varying genres have continued the trend of using the story to explain related game mechanics of death and saving. To most games, these exist outside the scope of the game, but to the ones that use parts of the story to explain them, they enhance and extend the game.

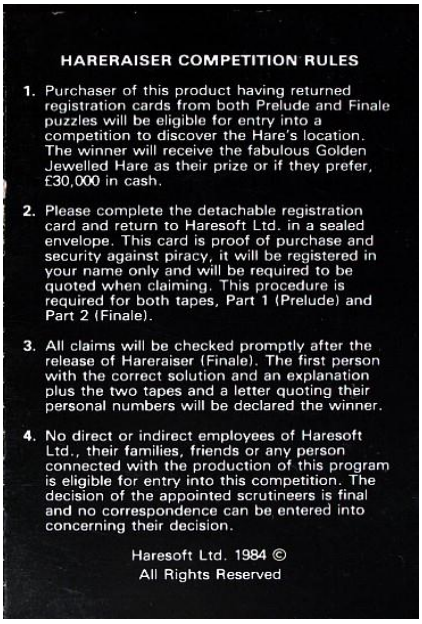
Treasure Games - 1982-1985

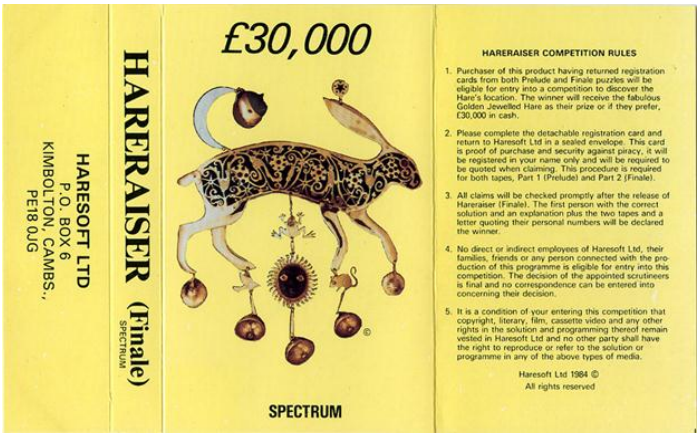
Treasure games see a major departure from the *Rogue* format of irrevocability. These digital computer games, formed out of the the treasure book genre, where readers could solve



complicated riddles hidden in the pages of the books to gain a treasure hidden somewhere in the real world. The most famous of these books is *Masquerade*, a children's book published by Kit Williams in 1979. In the illustrations for *Masquerade,* Williams hid clues to the location of an actual treasure – a gold hare – which adept readers could solve to get to the prize. The eventual winner of *Masquerade*'s treasure hunt used the hare as a prize in his own digital treasure game, named *Hareraiser*, which was released in 1984. *Hareraiser* was released in two parts: The Prelude and The Finale. Gamers, after solving the riddles in the game were required to mail in their proof of purchase for the two games to the developer in order to win the grand

prize, which was the original golden hare prize from *Masquerade*. The game, however, was never solved, and the hare was sold at auction for £31,900.





The rules for Hareraiser *states that only one person can be declared the winner and in order to qualify the player must submit the proofs of purchase for the games.*

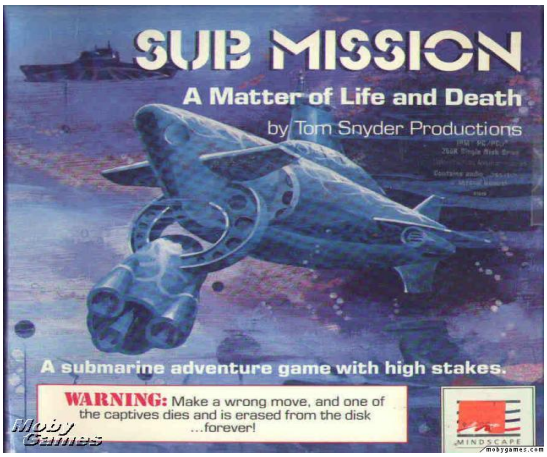
Other treasure games which came out around this time period include *Pimania* (1982), *Eureka* (1984), and *My Name is Uncle Groucho, You Win a Fat Cigar* (1983). These games also included real-world prizes that could be claimed only once by players. *Pimania*'s prize of a golden sundial went unclaimed for three years before two women won it. *Eureka* offered a £25,000 goal to gamers who were

able to solve the many clues to reveal a phone number which, once dialed, would guarantee them the prize. The game was won by Matthew Woodley, a teenager from the UK. *My Name is Uncle Groucho, You Win a Fat Cigar* required players to find a hidden celebrity figure in the game (Mickey Mouse) and contact the developers with the information. The winner won a trip to Disneyland.

The irrevocability in these video games comes from their prizes – they can only be won once. Players can continue to search and replay the games even after the prize is won, but they will never be able to claim the prize as their own.

***Sub Mission* - 1986**

Sub Mission was the first game to not only make it impossible to get through the same experience twice, but to make it impossible to get through the game twice. In *Sub Mission*, the player is forced to pilot a submarine with two people on board. The novelty of the game was, as the cover stated, that the game would erase the characters from the game if they died, rendering the game unplayable. So here, not only did losing mean replaying, it meant getting a hold of a new copy of the game to try again.



There were some concessions made to ease the fact that the player could lose the ability to play his or her game. Each character, should they die, could be resurrected once, and if the game was lost, the player could petition the "Space Commissioner" for a new copy (which really meant just sending a letter to the developer). Furthermore, the player could practice any level as much as desired, but only with robots, and he or she would be unable to proceed.

This is the first example to be truly irrevocable in some way. If we imagine a player who refused to get a new copy of the game after finishing (or failing to finish) his or her copy, then he or she would have exactly one chance to beat the game. This would likely have some interesting implications as to how the player proceeds with this knowledge. Since the cover plainly states the game has the ability to destroy itself, most players would likely tread carefully when playing. They would not be as cautious as with real human life, since the only thing at stake is a game disk, but the fact that the game disk is at stake changes the game. However, as most games have left behind permanent death, a game that can never be played again wouldn't sell. It is for this reason that most games to follow *Sub Mission*'s example are free and, perhaps more importantly, are very accessible because they are hosted on Internet sites.

Agrippa **- 1992**

Few digital media experiences exemplify irrevocability better than *Agrippa (a book of the dead),* a visual novel released by William Gibson for Macintosh computers in 1992. The poem of *Agrippa* is

focused on the fleeting nature of memory, and as such lends itself readily to irrevocability. The application which displayed the poem was stored on a 3½ inch floppy diskette and had code within that would erase each line of the poem as it scrolled up the screen. This meant that if someone started the application it would immediately be rendered inoperable for future players. Irrevocability in this regard was easy to implement, as the user at the time was unable to read the poem elsewhere and they were limited to reading it just once per disk. *Agrippa* is truly irrevocable. Conceived as an "art book on computer that vanishes," Agrippa erases

itself as the lines of the poem scroll by (Schwenger). As soon as the application is opened, the poem begins playing with no input needed from the user. From the moment the program opens, it begins erasing itself.

Everything about *Agrippa* dealt with never reclaiming the experience again. Bundled with the *Agrippa* application was a book of supplementary material which was treated with chemicals so that, once opened, the pages would start fading over time until there were nothing left but blank paper. The application would not run if the floppy disk was locked, as the program was set to overwrite parts of its code as it ran. Perhaps as a desperate plea, the directions also tell users to "not copy the application *Agrippa*," suggesting that it was possible to copy *Agrippa* at the time and replay it, essentially destroying its irrevocability (Directions for *Agrippa*).

Ironically, even *Agrippa's* irrevocability turned out to be ephemeral. Copies of *Agrippa* now exist online that are easy to download and replay, defeating the original intent.

AGRIPPA

Directions for Agrippa:

Agrippa is set to run with 3MB's of memory; it will run on 2.5 if you change the memory setting in Get Info and override the setting.

Agrippa takes anywhere from 30 seconds to 5 minutes to set up, depending on your computer. Do not be alarmed if any of the windows or graphics remain on the screen for periods of up to 5 minutes.

Agrippa has no commands that can be executed. When it is over it will quit by itself.

Agrippa will not run if the disk has been locked. Agrippa is intended to rewrite portions of itself, if you attempt to prevent this from happening the program will not execute.

Agrippa will also not run from a copy made of the file. You must run Agrippa from the diskette that came with Agrippa (a book of the dead). Also, do not copy the application Agrippa.

Lastly, Agrippa will not run if there is a debugger in RAM. If you regularly use a debugger please move it out of your system folder and restart your computer.

Note: Agrippa is not a virus, nor does the disk it comes on contain a virus. It does not permanently alter your computer's memory, either physical or RAM, however it is very important that you heed the instructions given above.

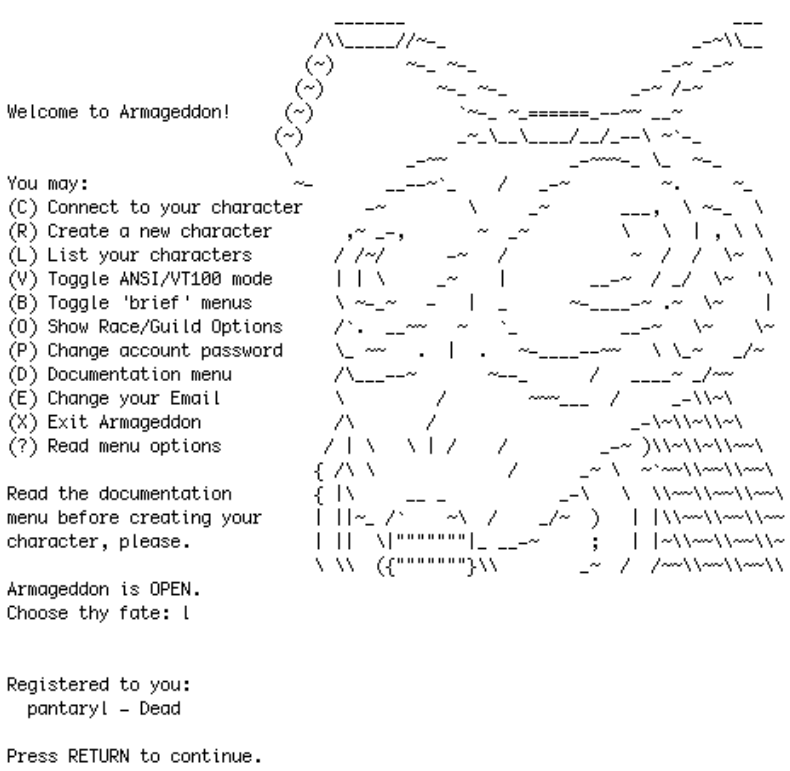
If for any some reason you encounter a difficulty with your disk due to high speed copying processes a replacement disk will be provided. Disks which break down or refuse to run due to attempts at reproduction or dissassembly will not be replaced.

Agrippa is one of the most unique examples of irrevocability in the digital medium. However, authors have not chosen to follow *Agrippa's* lead. Some games, such as *One Chance*, are irrevocable as long as you don't change computers, but there have not been games since that go to the effort of deleting themselves from existence. Perhaps the reason that there haven't been any games or texts that self-destroy themselves since *Agrippa* is because one-time playable games aren't profitable unless they are part of an event. *Agrippa* was sold in limited quantities and money was never the goal.

What else could be stopping developers from creating a similar game? Today's gamers expect checkpoints, save points, and near-infinite save slots – replayability is a major feature in all AAA games today. Gamers are just not as interested in only being able to play a game once as they are in playing it as many times as they want.

Armageddon **- 1991**

Armageddon is a Multi-User Dungeon (MUD) game created in 1991 with a premise similar to *Rogue* and *Wizardry* – the characters that gamers play can die permanently. *Armageddon*, however, was set in a multiplayer scenario – a first amongst irrevocable games. Gamers could kill one others' characters, which would then be removed from the game for good. This meant that characters could live for a long time, should the character's creator keep them out of harm's way. All it took to erase a player's hard work was one chance encounter with an enemy player.

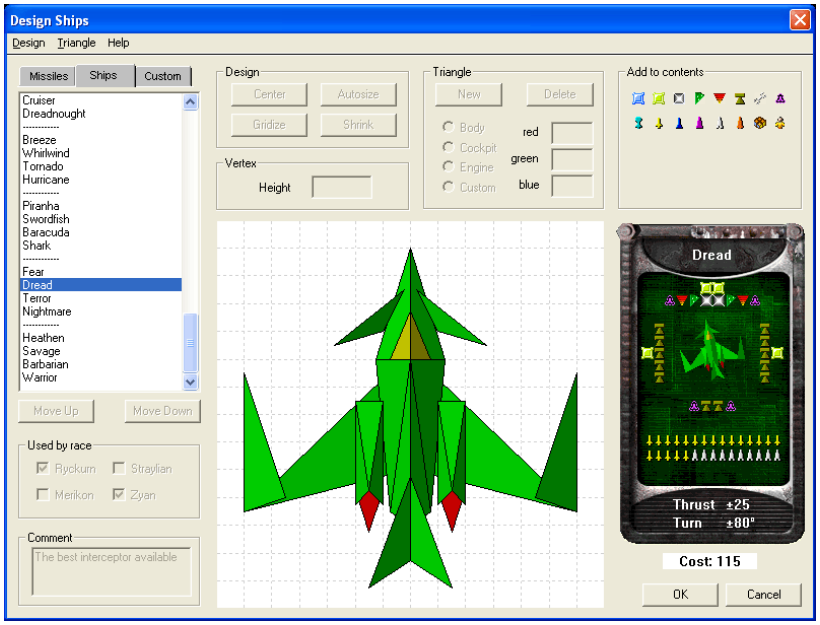


Death in *Armageddon* means that players are forced to end their experience with one character and start completely fresh on another. All the story that had been built behind the now-dead character died with it, and the player was unable to continue that experience.

Major multiplayer games since *Armageddon* have not chosen to follow with its permanent death route, because players now expect continuity in multiplayer games. Camaraderie is a main feature in these experiences, and if characters and their traits suddenly die, other players cannot rely on their partners for support. This causes disconnects between parties of gamers because their traits may change play to play, making it difficult to depend on certain players' skills. Permanent death worked for *Armageddon* because it was not played by as many people, and it didn't require any heavy teaming up in order to get further ahead in the game.

Critical Mass **- 1995**

Critical Mass is a turn-based space battle strategy simulation game. Gamers control a commander in lead of a squadron of spaceships. Built originally for the Atari ST and then ported to Windows 95, *Critical Mass* contained an unusual play mechanic– the commander that the player controlled could die, and die for good.

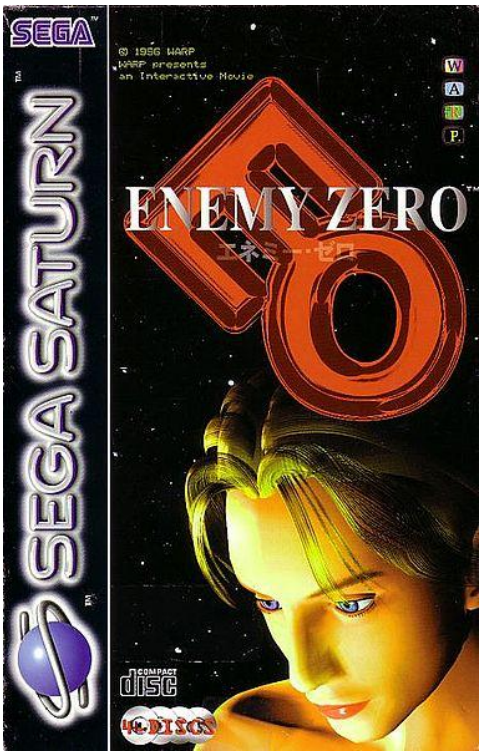


Players who had amassed a formidable squadron were forced to restart their assimilation of units if their commander died. Similar to the experiences in *Rogue* and *Wizardry*, gamers had the ability to replay the game as many times as they wanted, but they would not be able to experience the same simulation twice. Each playthrough would remain unique because of the different configurations of opponents and the setup of squadrons.

Once the commander died, the entire squadron which the player had been forming for the entire game had to be rebuilt from scratch. Imagine if in any of the *Warcraft* series of games (starting with *Warcraft II*), or in any "defend the hero" variants, the heroes died and you had to start the entire campaign over with a new hero. Due to the small number of heroes in the game, enough deaths would cause players to eventually get to a point where they could no longer progress through the campaign. This would cause players to care for their hero more – not just because they are powerful entities in the game, but because they are what allows the player to progress through the story. Like in *Armageddon*, one small accident against the important character hinders progress and forces the gamer to restart.

Enemy Zero **- 1997**

Enemy Zero for the Sega Saturn offered a unique implementation of irrevocability. The game used a save and restore mechanism integrated into the story – in the game, the character records his



memories to a tape recorder at a cost to the voice recorder's battery. This cost was eternal – through deaths and resets, the total would remain the same. If the player died enough times and had to play back the recording (reload a save), the costs would add up and he would eventually be unable to progress further in the story. Story-wise, this made sense; the more times the character would need to remember how events went – he suffered from amnesia – by playing them back through the voice recorder, the less of a charge the device would have. Eventually the device would die and the player would be unable to record new

memories or listen to the old ones. The cost of saving would allow the player to save a total of twenty-one times on normal difficulty mode and thirty-three saves on easy, but never reload once.

This Enemy Zero *player in hasn't yet saved as his or her battery is still at maximum capacity.*

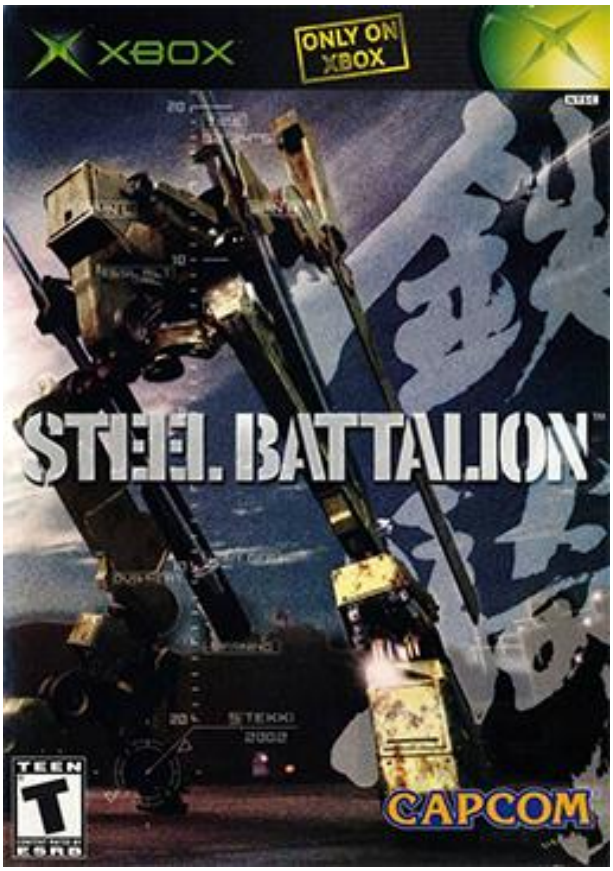
Enemy Zero lets the player lose multiple times; losing is not defeat like it is in *Rogue* or *Critical Mass.* If the player is unable to get past a particular region, they will not have more than the allotted chances to try. The irrevocability here is the concept that the character in the story controls the irrevocability – as long as he can listen to the voice recorder and remember how things happened, he could continue trying. Saving became an exercise in resource management instead of primarily being a way for the player to change their actions. Instead of forcing the player to consider how every step may affect the character, Enemy Zero affords the player an opportunity to make mistakes and to try again, so long as they don't need to do so many times.

Other games since *Enemy Zero* have used a similar save-management system. *Resident Evil 2* (1998) required players to have ink ribbons to save at typewriters. These ribbons were items which took up space in a rather small inventory. The player had to decide whether or not it would be feasible to

carry his own method of saving around all the time or to pick up that extra health potion. In the game, ribbons and health potions take up the same amount of inventory space. In the process of managing everything being carried, the player must factor in the ability to save.

Steel Battalion **- 2002**

Steel Battalion (2002) was intended to break normal conventions as an experimental game. It gained much notoriety due to its two distinguishing features. First, it required a large, expensive peripheral that simulated the control panel in a giant mech to control it. Second, that control panel featured an eject button which, should the player fail to press it at the right time upon losing, could lead to the player's character dying, permanently. Furthermore, even if the character survived, losing a battle without the money to replace the lost mech meant that the game still ended, as the character's career was over.



Both of these points factored into reviews of *Steel Battalion* As IGN's review stated, "the game demands a certain skill level before you'll have any fun with it." These reviews sought to show whether the game was worth the many costs to play it. There was the monetary cost of the game and its controller, the mental cost of learning to use such an unwieldy device, and of course the risk involved with losing. Permanent death, while generally accepted in arcade-style games (which are meant to be replayed until perfected), must be more carefully considered in "narrative" games, which are expected to be finished

without restarting from scratch. *Steel Battalion* was the sort of game meant to be started and stopped, and finished over many hours, so death near the end meant the end of that save file and the undoing of dozens of hours of progress.

Despite all these complaints, *Steel Battalion* fared well for what it was: experimental. It was received well enough to get a sequel (also using the peripheral) and an upcoming title planned to use the Xbox Kinect. Most critics, including the IGN review cited above, accepted that it was a well-designed and enjoyable game, but any player must be willing to accept the high cost of admission to enjoy it.

Killswitch **- 2007**

Killswitch is the only video game in this chronology that does not actually exist. The game is an urban myth, known as "creepy pasta" to the online community. "Creepy pasta" is a viral story which has been copied and pasted around various message boards with the intended effect which is to unnerve and shock the reader. There is a game described in the story which is unlike any game: "like reality, it is unrepeatable, irretrievable, and illogical" (Valente). *Killswitch* is supposedly a standard role playing game (RPG) where gamers chose between two different characters to play, designed with a self-delete

mechanic built in; upon a player's completion of the game, every trace of it would be removed from the computer.

The game was also said to be incapable of being copied, which meant that the game only exists for the gamer playing the game and for no one else afterwards. The player was unable to replay the game and also would not have the chance to play the game to completion with both characters unless the player was to buy additional copies.

Killswitch's impact is difficult to measure, but can be gauged by players' reactions to the game. When the rumor of *Killswitch*'s existence appeared on the Internet, it spread fast. Gamers were perplexed about game's mechanics and were quick to find fault with them. Online comments pointed out how *Killswitch* could not be made uncopyable with the hardware available at the time. Others suggested out that no one would pay the money for a game without the option to replay. Supposedly, the only remaining version of *Killswitch* was sold at auction for $733,000 to a man in Tokyo (Valente).

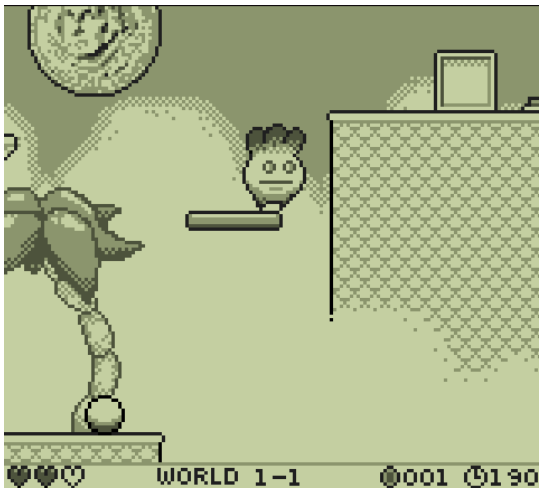
If *Killswitch* was real, it would be the most irrevocable item in this history. Even as a rumor, it highlighted the concept of irrevocability to the gaming community on the Internet in the form of a creepy story that was quickly passed around.

Free Will **- 2009**

Free Will is a small Flash game on Newgrounds.com which behaves at first like a standard platformer. The player progresses from the left side to the right, jumping around obstacles and pressing switches. Where *Free Will* differs from other platformers is when the player either completes the game or dies – when either of

those occurs, the player is presented with the standard “Game Over” screen.

While the “Try Again” option does not seem to create irrevocability, it is simply a ruse by the game. Upon selecting the option, the game starts replaying the player’s last playthrough. This continues until the replay finishes the game or dies, just as the player had. When it does, the same game over screen appears. Then the game replays the player’s decision to try again. This continues until the player closes or refreshes the browser.



While not actually irrevocable – the player can refresh the browser to play the game anew – the game does pose an interesting idea. Previous iterations of irrevocability have the games erasing themselves so the player cannot replay. *Free Will* specifically lets the player watch his playthrough again, but limited to a single playthrough.

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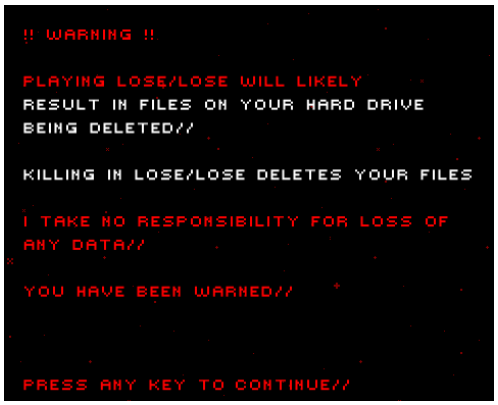
***Lose/Lose* - 2009**



Lose/Lose is a game which bills itself as a “video-game with real life consequences” (Gage). In the game, players are presented with a space shooter arcade game, where enemies come down from the top of the screen towards the bottom of the screen where the player is. The player is instructed to kill the encroaching enemies, as doing so will both protect his or her ship and also increase the amount of points

that the player has accumulated. The twist in *Lose/Lose* is that each enemy that descends is actually a randomly selected file located on the player's computer, and killing the enemy deletes that file permanently from the machine. Files deleted from the computer in this manner are not simply sent to the Trash or Recycle Bin, but are completely removed from the computer with no simple way to restore, aside from a complicated and uncertain attempt at drive restoration.

Lose/Lose was meant to be a test of will for the player – would the player be willing to play this game and risk losing important documents and media, just for a high score? If the scoreboard on the *Lose/Lose* website is any indication, it is likely.

The high scores on the Lose/Lose *website.*

While *Lose/Lose* may be replayed ad infinitum, the irrevocability is in its mechanics. Specifically, files lost through destroying opponents are permanently removed from the player's computer. Almost any action performed in-game means the loss of data. From a music file to important system resources, anything and everything could be removed from the computer.

While this risk could become catastrophic, the game still has an abundant number of players. The scoreboards have close to 1500 scores listed, with scores from 412 files removed to just one. While there

are many players, the game remains an obscure one. However, it did reveal an apparent interest in small and free games with novelty gimmicks, which is how the mechanic in *Lose/Lose* can be classified. Even with the inherent risk, *Lose/Lose* has its players and its own version of irrevocability.

***We the Giants* - 2009**

We the Giants is another game that records user data to give every player one play. The interesting twist, however, is that most players won't see the end at all, and they have to make that decision to stop. *We the Giants* asks each player control a Cyclops, trying to reach a single bright star high above the ground. But in order to reach the stars, players must willingly die, to lay their body such that future players can climb higher.

Because of this willingness inherent in the game, no one should leave the game feeling dissatisfied with their ending. Each player knows he or she probably won't make it to the sky, but at least they can help the community along and someone will succeed. It is also interesting that *We the Giants* is similar to the treasure games discussed earlier, as there is only one "winner" who gets to see the final ending.

***Heavy Rain* - 2010**

Heavy Rain, by its design, was not irrevocable. Death was not the end, and it could be played as many times as the player wanted. In fact, the game was divided into levels, making it easy to go back and replay any point to

explore other options or possibilities. However, *Heavy Rain* is not meant to be a traditional game. Its levels are a series of interactive "scenes," more like an "interactive movie" than a game played to win. As such, the game is played to be experienced, and no choice can be considered "right" or "wrong" within it. A failure then, is only in the relationship between events and what the player desires, not anything the game enforces. Since the game does not force the player to try again, the player must set his or her own goals, and feels a sense of ownership over the path of the story.

Heavy Rain's sixth ending is a startling image.

Since *Heavy Rain* is a game without failure (in the sense of requiring multiple tries), then, no part of it must ever be replayed to continue; any replaying must be a conscious choice to redo. The game's director, David Cage, stated that:

> "the right way to enjoy *Heavy Rain* is really to make one thing because it's going to be your story. It's going to be unique to you. It's really the story you decided to write, and that will be a different story from someone else. And, again, I think playing it several times is also a way to kill the magic of it."

Heavy Rain's first ending is very different than the sixth.

Thus, while not demanding it, *Heavy Rain's* structure implies irrevocability. By the nature of storytelling this way, the player has a sense of ownership over the ending. Because of this ownership, to try again is to erase the previous outcomes and the player's own efforts. Consider reading a book, and then tearing out the ending to rewrite it. Replaying or altering a play of *Heavy Rain* should feel similar. Just knowing that the story could have changed at any time is satisfactory; the outcome belongs to the player. A game using irrevocability successfully should evoke this feeling as well.

Nuzlocke Challenge - 2010

The Nuzlocke Challenge is unique in that it is not a specific game title. Rather, it refers to a style of playing a popular series of video games, *Pokemon*.

Nuzlocke Rules

Mandatory Rules:

1. If a Pokemon faints you must release it as soon as possible.
2. If all your Pokemon faint you must start over.
3. You must nickname every Pokemon you catch.
4. You may only attempt to capture the first Pokemon you encounter in each area, route, cave, city, etc. If you don't catch it, tough shit.

Optional Rules:

1. You may not use any items (Potions, Antidotes, etc)
2. If an HM'd Pokemon faints you may not use any of the attached HMs. If you have no other Pokemon that can learn that HM and it is needed to progress in the game you must start over.
3. Make a comic whenever something amazing, upsetting, or terrible happens.

The challenge started with a single player, who wanted to add some difficulty to *Pokemon Ruby*. After making a webcomic to chronicle his character's trials, popularity grew so much that many players decided to try a *Pokemon* game this way.

It's an interesting note, then, that the story is what attracted so many players, since the interest in the rules grew out of the webcomic. While adding difficulty was a major factor, the entertaining story its creator told sold the Nuzlocke Challenge (and created its name). Many players, therefore, realized the benefit of considering fainted *Pokemon* dead and losing a battle to mean losing the game lay in the interesting stories that they gave players to trade. By the nature of being an RPG with permanent death, every play of the Nuzlocke Challenge is unique, and many players realized this.

***Nier* - 2010**

Nier presents its own form of irrevocability rather late in the game. Built as a standard RPG, *Nier* boasts forty hours of gameplay time. The difference between *Nier* and other role playing games of similar design is that *Nier* offers the player a unique choice at the end of the game.

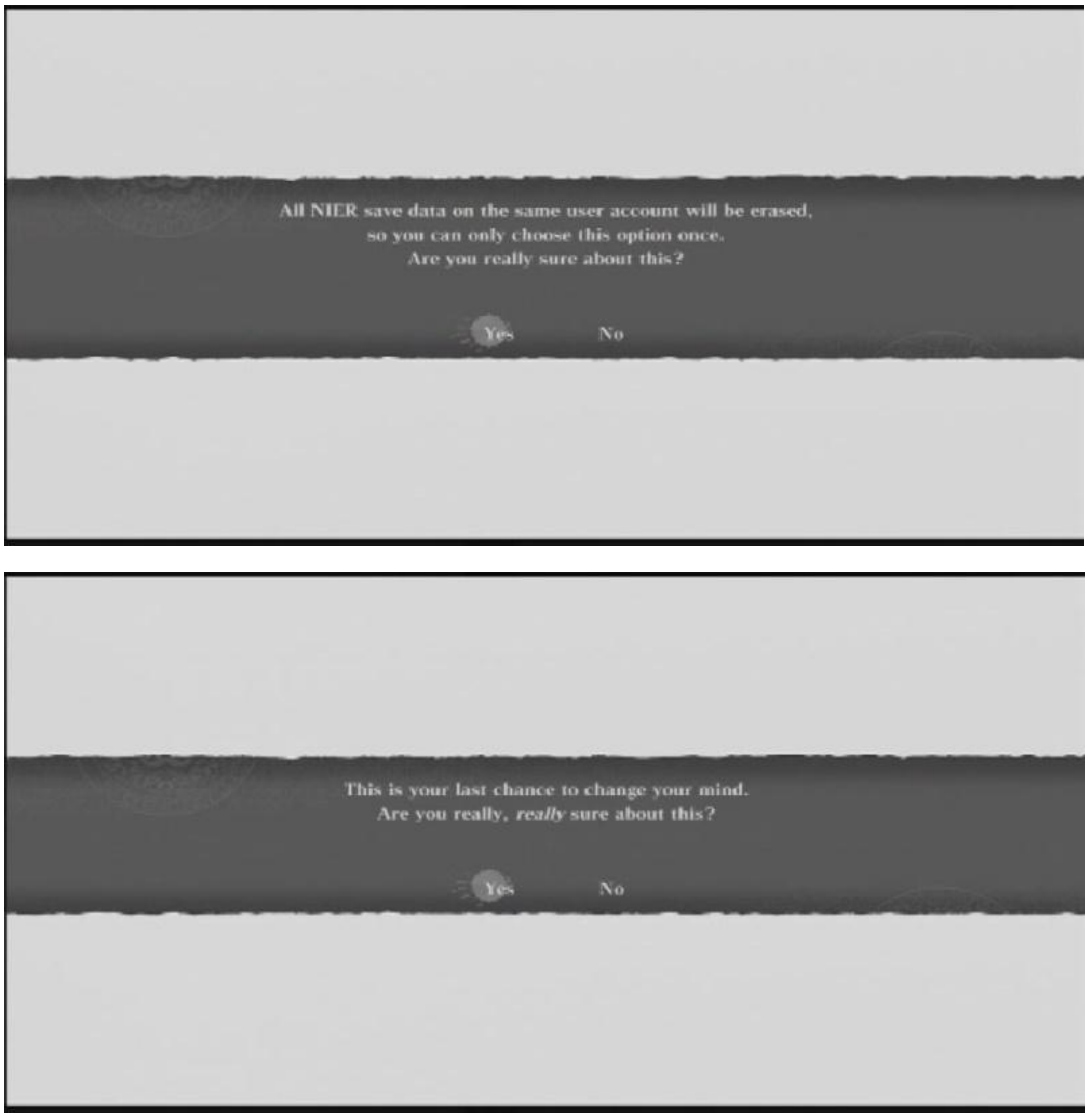
The game follows one character in his quest to cure a young girl from an incurable disease. After the player has been through the forty hours and several different story lines, a choice is presented to the player. If the player chooses, they can change the fate of a different character in game, essentially ending his suffering, while wiping the minds of all the other characters in the game of the player's existence. If the player chooses this option, *Nier* shows the gamer the extent of his or her sacrifice; each character is shown having his or her memory wiped of the player, even though the player's actions remain. The characters in game no longer remember any trace of the main character.

Nier's choice to completely erase all of the player's progress in the game.

When the carnage is complete, the player is shown all of his or her save files, which are all erased from the console and removed from the hard drive. This means if the player wants the chance to go through the story another time, he or she must start from the beginning and lose all of his or her progress.

This option gives the player a visual warning of the eventual save file deletion and lets the player cancel the decision and choose another. And to make sure the player was fully aware of the extreme nature of the decision, *Nier* displayed multiple prompts asking if the player really wanted to make the choice. This option is the final decision that can be made and in order to see all of the story elements contained in *Nier* the player must choose to have his or her save file deleted.

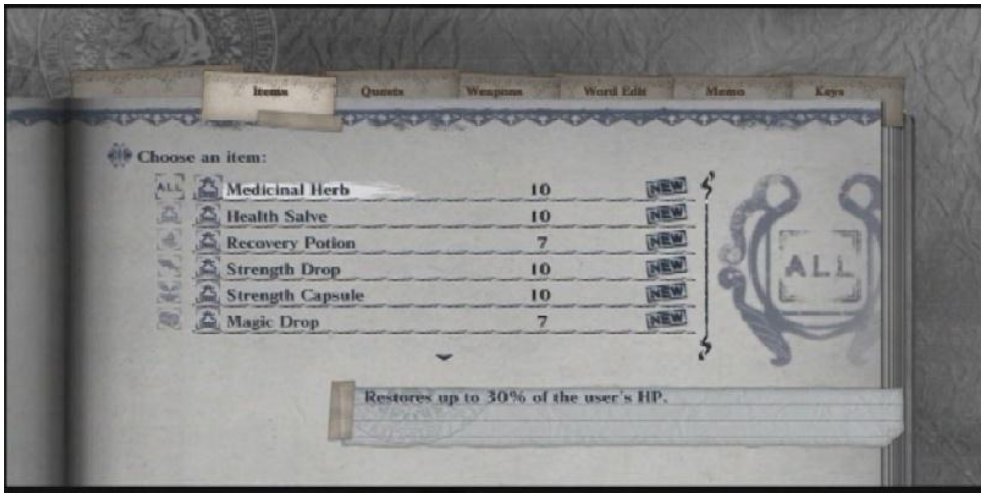
Nier asks the player if they are sure they want to make this selection.

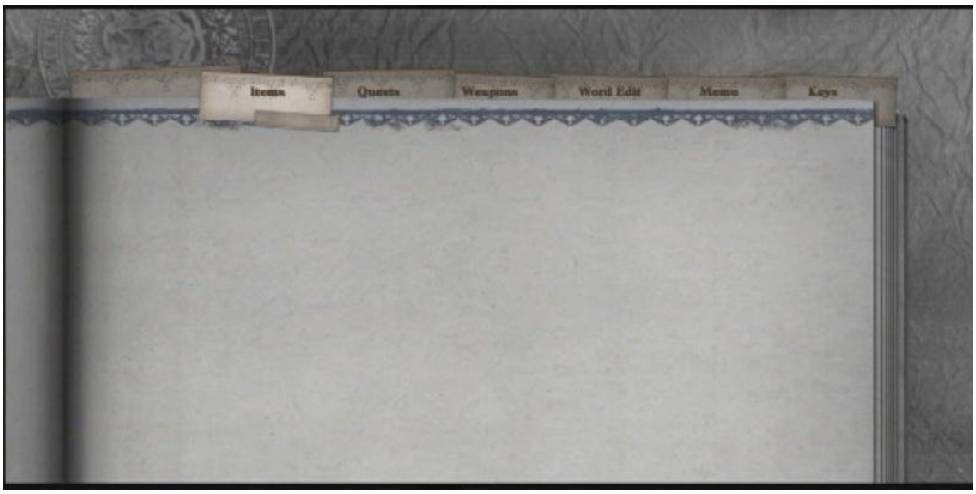


Nier wants to ensure the player is completely sure they want to make this decision.

Once the decision was made, however, it was permanent and the player was unable to reclaim their saves. This choice the player made did not change the difficulty of the game – it was an ending decision. It was meant purely as a capstone on the story. To continue the story this option had to be selected, which meant that all of the player's progress would be removed. The irrevocability of the

choice was a storytelling novelty, meant to bring the player's experience to completion in one finishing move.



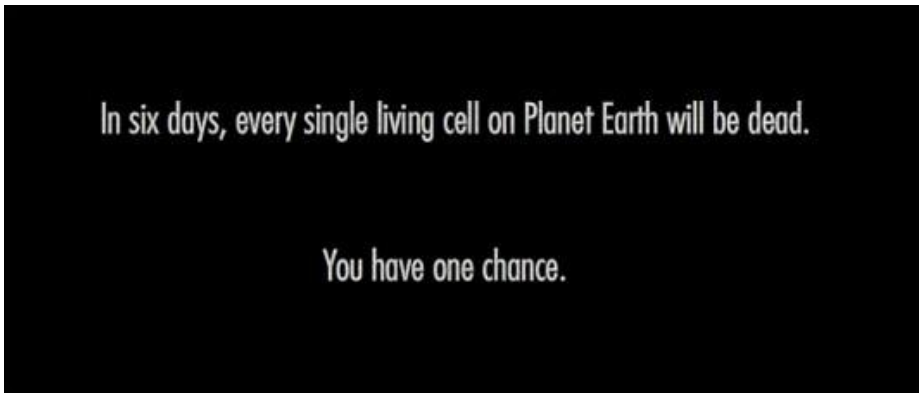


Players are then rewarded by watching all of their progress erased. Their inventory is wiped clean and emptied before their eyes. This ties directly into the narrative; as the player's accomplishments are being erased, the memories of all of the characters contained within the game also lose all knowledge of the player, though the player's actions remain. The entire experience of playing *Nier* is removed, with the only person retaining that experience is the player.

While some games use permanent death as a gameplay element, that is, an element which forces the player to reconsider otherwise risky maneuvers, *Nier*'s irrevocability is a storied ending to a rather impressive interactive experience. The hard choice players are forced to make is the worth of a record of their time; to the players, is a save file more important than the memory of having completed the game in its entirety? Or is the memory of the game a sufficient reward for playing the game? This decision can only be made by the player, and when they do, it is permanent.

One Chance **- 2010**

One Chance is a game with simple graphics that can be played in about thirty minutes. The game is meant only to tell a story, with the restriction that you have one chance. Even with this limited scope and restriction, the game was well received, as most reviewers on Newgrounds (the site where the game hosted) praised its unique design. In it, the player must guide a scientist through one week, with a reminder at the beginning of each day how much time is remaining until the end of the world, and the the player has one chance to avert it. These make sure that the player is always aware that, in the game world, everything is riding on the choices he or she makes.



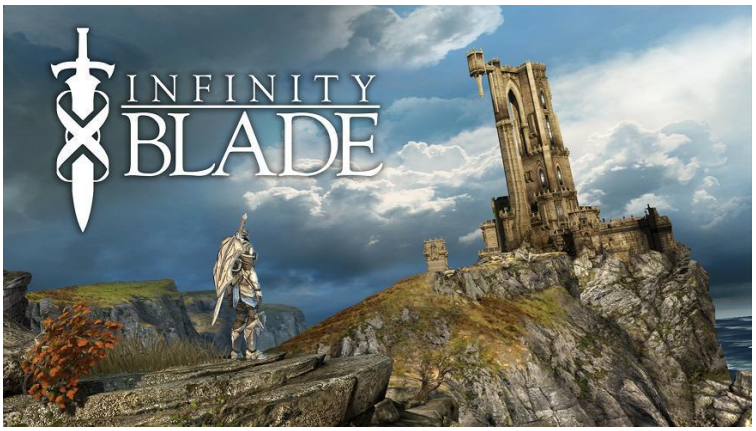
A possible ending. Trying to restart the game will return to this image only.

The game is unclear about what actions influence the story. Regardless of this divide between cause and effect, the players felt that they owned their particular ending. Thus, when it is over, the player can't think, "I should not have gone to the roof" but is left wondering "what if I hadn't gone to the roof?" And this speculation (perhaps regret, even) is ensured by the true irrevocability of these choices.

One Chance is very clear that upon completion, the game cannot be played again. It uses the data saved by flash to stop the game at the end, and show the final scene if the game is reopened. Of course, the player could still go to another computer, find the game on another web page, or clear their cache, but this behavior is outside the realm of any intended interaction with the game.

***Infinity Blade* - 2010**

Infinity Blade is an iOS game that is best described as a linear Roguelike. The player is able to replay the game multiple times where each playthrough is a progression of randomly generated enemy encounters that are experienced linearly – there is a clear progression from the beginning of each play to the end. *Infinity Blade* is different from other similarly styled games by effectively giving story-based reasoning to the multiple playthroughs.



The story dictates that each run through the levels, which ends with the player's death or completion at the end, is only one person out of a bloodline of similarly tasked family. When the player's character dies, he or she is reincarnated as the character's son, out to avenge his father. The game is meant to be played in short bursts due to its repeated gameplay – many enemies repeatedly show their face. The linear path that players are forced to follow does branch at some points but these points are fixed. Additionally, these branches are only accessible after completely specific segments of the path in order.

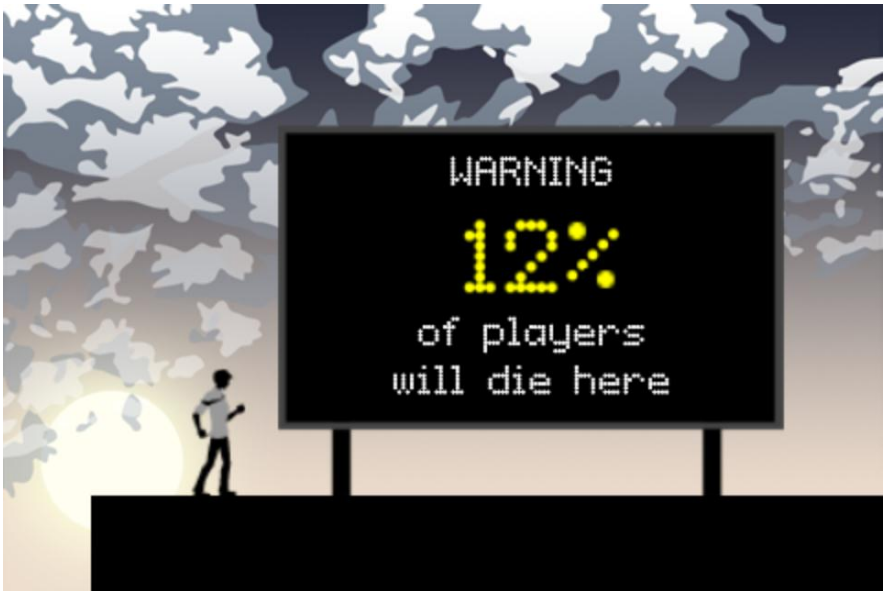
The irrevocability in *Infinity Blade* comes with the permanent death of the player's character. This makes the game slightly different for each playthrough, enough so that the player is uncertain to

undergo the same playthrough experience more than once. The interesting thing that separates *Infinity Blade* from the other Roguelikes is that it explains the next character's playthrough as a direct descendant of the previous one, even going so far as to inherit the predecessor's armor and weaponry. While this is a weak example of irrevocability because the player retains all of the character upgrades, each playthrough is unique with different enemy layouts and paths.

For such a popular game, the story puts a lot of weight on this fleeting existence of the character. While the player is still able to achieve a connection with the character, it should be said that the player has connections to multiple variations of the character, which each different playthrough being an entirely different person – at least, that is how the story describes it. This is not something that is described in video games similar to *Infinity Blade*, such as *Rogue* or *The Binding of Isaac*.

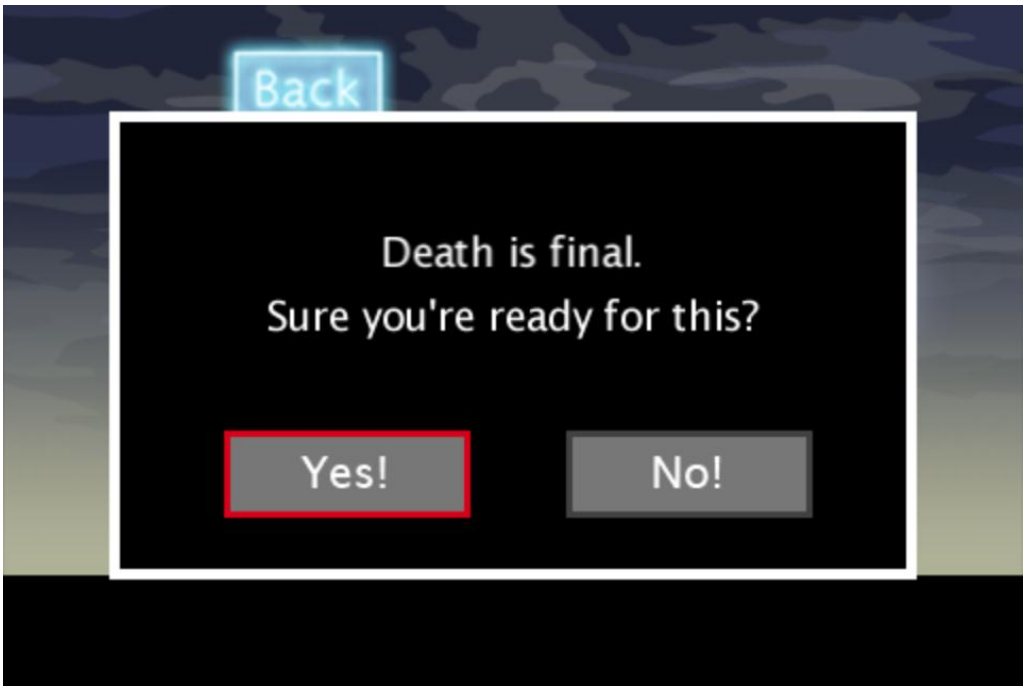
***One Single Life* - 2011**

One Single Life is similar to *One Chance* because the point of both is the player only gets one chance to play the game. This seems like a gimmick since the game expects players to fail quickly, without giving any reason for this finality other than to be a difficult game. *One Single Life* does set it self apart from similar titles by treating this fact like a challenge.



The player is taunted with the percentage of players to lose on this level.

One Single Life only requires that a player time jumps correctly to succeed. There are ten levels, and each one can be practiced. But upon attempting a jump for "real," the game reminds the player that in the "real" world, failure means death. And to add to the pressure the game forces onto every jump, the first thing the player sees in each level is what percentage of players lost everything on this one.



The player is asked if they are sure they want to continue with the challenges.

Ultimately, *One Single Life* is a simple game with permanent death (the game stops after losing, but re-downloading it is an easy fix). But it revels in its challenge, and encourages collaboration and comparing scores, gaining it a positive reception despite its restrictive nature.

This gamer died rather early.

Chain World **- 2011**

Chain World is a bit like the Nuzlocke Challenge in that it isn't actually a game. Rather, it is a set of rules to be applied to another game. *Chain World* was a specific instance of *Minecraft*, played off of a USB drive. The rules of *Chain World* are reprinted here:

1. Run *Chain World* via one of the included "run_ChainWorld" launchers.
2. Start a single-player game and pick "*Chain World*."
3. Play until you die exactly once.
   3a. Erecting signs with text is forbidden—your works must speak for themselves.
   3b. Suicide is permissible.
4. Immediately after dying and respawning, quit to the menu.
5. Allow the world to save.
6. Exit the game and wait for your launcher to automatically copy *Chain World* back to the USB stick.
7. Pass the USB stick to someone else who expresses interest.
8. Never discuss what you saw or did in *Chain World* with anyone.
9. Never play again.

Chain World was designed by Jason Rohrer, as an experiment in making a game as a religion, the subject of a game design contest at the 2011 Game Developer's Conference. As such, it requires that all players follow these rules (or commandments, as he calls them).

The first man to inherit Chain World, Jia Ji, is wearing it around his neck before passing it on to the next person in line.

The irrevocability is emphasized in the last two commandments. Players must treat the game as a closed system and cannot influence any future players, but they only have one chance. Any unfinished monument lies incomplete, ready to be misinterpreted, finished, destroyed, or rebuilt, but never quite according to the creators design. No choice, once "locked" by dying, can be undone.

As far as was made public, the game is still being passed around from player to player. But while *Chain World* has fallen into obscurity, its first few passes were much publicized. The man Jason Rohrer gave *Chain World*, Jia Ji, put the game on eBay. He was attempting to set up a system wherein interested players could "buy" a play of the game, and pass it on to celebrity players, thereby raising proceeds for charity. Many who heard this news were upset that a game meant to be a religion was being bought and sold, including Jason Rohrer himself. It seems, given the lack of press since, that the anonymous winner of the auction has passed it on quietly, true to Rohrer's ideals.

Minecraft **– 2012**

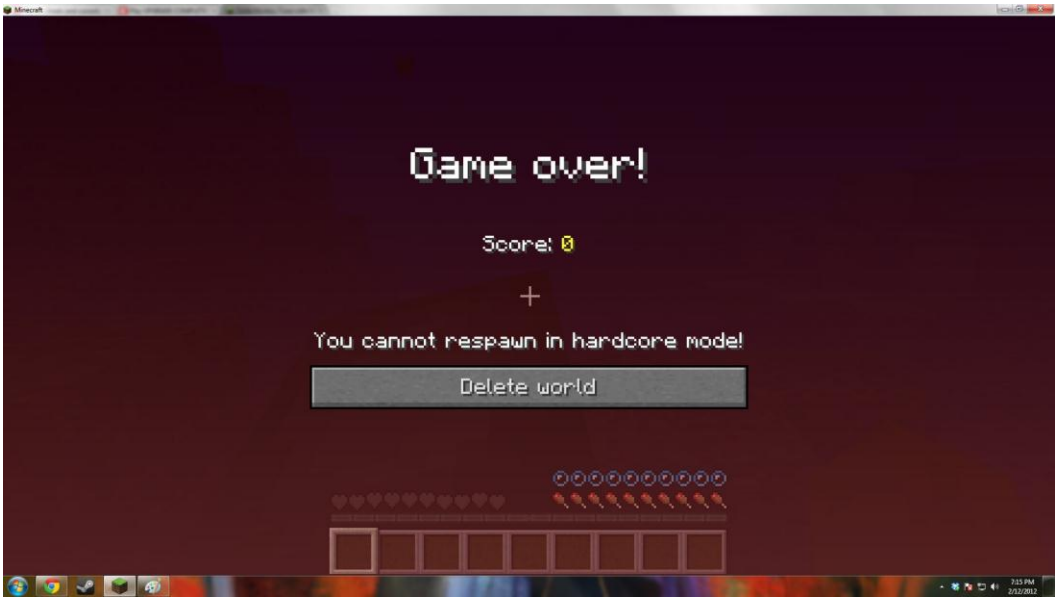
Minecraft is unique because its version of irrevocability was implemented after another game – *Chain World* – took *Minecraft* and used it to enact a different form of irrevocability.

Minecraft originally had no irrevocability in it until Rohrer modified it for *Chain World.* The creator of *Minecraft*, Markus Persson, implemented his own version of irrevocability

in game for *Minecraft*'s official release in November 2011.

Minecraft is a sandbox game, that is, a game which features a boundless world where the player generates the content, similar to *Second Life*. The primary difference between Second Life and *Minecraft* is that *Minecraft* has an addition to irrevocability – each world created in the game is randomly seeded. Unless the player manually enters a seed, no two worlds are exactly the same.

Officially released in version 1.0 (after *Chain World*), *Minecraft*'s hardcore mode consists of one simple rule – the player dies and as a consequence he or she must delete the world where his or her character died. There is not an option to respawn, nor does exiting the game cheat the system. When the player returns to that specific world, he or she is given only one option: "Delete world."



While a player would be able to remake this world by using the known seed, the fact remains that in this sandbox world the chances of recreating the exact experience is marginal. *Minecraft* differs from other hardcore modes, such as *Diablo II*'s, in how it gives the player an experience – *Diablo II*'s world is a statically generated dungeon system, while *Minecraft* is an randomly generated open world

for exploration and creation. This makes the chances of the player experiencing the same play a second time even more improbable.

While exact replayability within *Minecraft* is a highly unlikely occurrence, hardcore mode adds a new element to the game. The player is forced to work faster to create shelter for when the monsters come out at night. *Minecraft*'s hardcore mode implements *Chain World*'s rules in a forced way – players are not given the option to disobey the rules and continue playing.

Part Three: Types of Irrevocability

Story

Few of the previously mentioned games implement irrevocability in a purely story-based format. In order for a game to be categorized as having irrevocability via story, the irrevocability must be executed by narrative means – it does not change how the game is played. The game's difficulty cannot be influenced by the irrevocable choices made by the player and the story is shaped by the decisions picked by the player's natural course through the game.

Games and other interactive media which fit this classification include *Agrippa, One Chance, Heavy Rain* and *Nier.* Each one of these games has irrevocability as a story element – *Agrippa*, being a visual novel about fleeting memories, erases itself as an internal statement. *One Chance* is all about the decisions a scientist (the player) makes which impact the world's population, and as such these choices cannot be retried nor replayed. *Heavy Rain* is an interactive movie the player can influence by choosing specific pivotal points. *Nier*'s ultimate choice is its last; the character sacrifices himself to better the other characters in the story.

The unique thing with narrative-based irrevocability is the story drives the game, and because of the irrevocable part the game or interactive media has the potential to leave a stronger impact on the player than most games. While story games such as *I Can Hold My Breath Forever* and *ImmorTall* leave the player with something to think about, irrevocable games grounded in narrative force the player to make decisions differently, or take fewer risks, knowing full well he or she cannot go back and make new choices.

Games use the narrative form to shape their irrevocability. A game with irreversible changes carries with it irreversible failure, and any game with a major goal that can be failed can be lost, which leads to frustration. Whether it is because the game's decision is grounded in the real world and therefore has no reset option or because it means the end of the story, these give the player a unique experience he or she will not be able to get again.

Gameplay

Irrevocability rooted in gameplay mechanics, however, are numerous. The decisions made in the game directly influence the player's outcome, whether it be a premature ending or the permanent death of a character. Games featuring gameplay irrevocability are *Rogue, Wizardry,* treasure games*, Killswitch, Lose/Lose, One Single Life,* and *Minecraft.* The Roguelikes version of irrevocability comes from the permanent death model mixed with a randomly generated dungeon – once the player dies, the experience has ended. Treasure games share in the gameplay irrevocability by having the ultimate game of getting the prize be a solitary occurrence. *Killswitch*, being a fictional game, doesn't give much to go on, but as the only given explanation is to prevent a player from playing through a second time, it's mechanic is purely gameplay. *Lose/Lose* is a game where the player actively deletes his or her files by blasting descending alien spaceships. *One Single Life* is a game about statistics – players can see who else died on a specific level and try to beat the game despite the odds. *Minecraft* follows with the Roguelike mindset.

Games like *Pac-Man* and *Space Invaders* did not have on-board memory, and because of this they could not save the game state. When the player died or the game was lost, all progress was wiped to make room for the next playthrough. Modern games do not suffer from this limitation – games like *Skyrim* or *Mass Effect* have near-infinite save slots whereas *The Binding of Isaac* (another Roguelike)

has none. By having a permanent end mixed with randomly generated content these games have within them each an irrevocable experience, akin to any real-life sports game.

Both

There are also games that use irrevocability to influence both the story and the gameplay. These are the examples is which the game can be seen in its entirety, in theory. This might require a lot of skill or perseverance, but the irrevocability does not stem from any infinite source of content. Frequently, death is permanent, as it is to a play of *Steel Battalion*, or in the extreme case of *Sub Mission*, to the entire game. To fit into this category, the limitation on playing with such unforgiving rules must be explained by the story.

In *Steel Battalion*, the narrative says that the player is piloting a mech, and losing a battle without ejecting means death. This influences the way a player acts. When close to death, he or she will shift focus to the eject button, valuing the ability to continue this game over trying to win this battle. *Steel Battalion*, with its large control device makes very clear what this action means in the game world: losing a battle means losing a mech, not necessarily your life. *Sub Mission* situates the story similarly, giving the player only one "real" attempt at any particular level, and explaining this with practice drones.

For a completely irrevocable experience, most games fail to find the delicate balance between story and gameplay. The player feels no real sense of ownership from the events within the game and is therefore wants to replay for every possible outcome. While these games still exhibit aspects of ephemerality, they don't find a balance and are unable to deliver a powerful statement of irrevocability.

Part Four: Implications of Irrevocability

A Hypothetical Implementation

Consider a game that can only be played by one person at a time, like *Four Minutes and Thirty-Three Seconds of Uniqueness* (2009). By storing the game world on a server that players access, this could be enforced, and it would allow for the world to change for all players. After playing to any end point, the player cannot re-enter the world, but the world shows lasting and significant changes from that player's time in the world. When a new player logs on, if possible, he or she starts from a very different location, but in any case, he or she will be treated as an entirely new person. As it stands, this world behaves much like any MMO, with the restriction of allowing one player at a time. Where this game sets itself apart is no player may recreate the choices of another player exactly.

And while that is true that MMOs have a certain degree of irrevocability (it is impossible to recreate an experience since the world is fluid), the main story (or stories) that players follow is the same. For instance, a player may choose the same name as a previous player, and visit the same location, but any non-player character (NPC) that met the first player would ask the new player if they were related. On a small scale, this changes the experience for the new player, and when every NPC follows suit, the new player is not inhabiting the same shoes as every (or any) other player. This is similar to *Chain World*, where every player can see the actions of previous players in plain sight. Even in extreme cases, when a player acts the same as another at every opportunity, this would be deemed odd behavior by every NPC.

And on the large scale, this hypothetical game is very irrevocable. Consider any quest in an RPG. Because the world reacts to every change, these changes are the biggest. A new player may hear

stories of an old player who rescued a boy from a well, but he or she can't do that because it has already been done. This is a technical limitation, to be sure, this game requires either a large volume of quests to be done or some very good generation of them at various intervals. On the largest scale possible is the "endgame" of MMOs, the overall conflict that players are seeking to resolve (or of which they are at least aware). For this, not only would no players be able to re-solve the final battle, they would certainly hear legends and stories of the player that did. Like the treasure games then, there could only be one winner.

Methods of Ensuring Irrevocability

To limit players to a single experience, many irrevocable games employ certain real-world measures to prevent the player from continuing or restarting the game. However, these measures amount to little more than suggestions, since any attempt to truly stop a player is nearly impossible.

The following list of methods were determined by thoroughly inspecting the different ways past games ensured irrevocability. After this inspection, a preexisting research paper was found which described the very same methods. Gonzalo Frasca's "Ephemeral games: Is it barbaric to design videogames after Auschwitz?" suggested three different techniques to ensure irrevocability: self-erasure, a ticket system, and a one-time event.

The first method excels at conveying an ethereal style, making the code of the game ethereal. Following the path of *Agrippa*, and applying it to video games, a few games have had the capacity to erase some or all of the executable. Notably, *Sub Mission* erased the parts containing the two human characters, rendering the game impossible to finish. However, this renders only that copy of the game incomplete. There is nothing stopping anyone from buying a few copies and trying repeatedly. Furthermore, the growth of technology has made this option possible only on consoles. On a PC, the

game is no longer played directly from the disc, but installed locally, leaving the original as a backup. And if a game could erase itself? Players would likely view this as a hindrance, and accuse the developer of forcing them to buy the game again, when in reality the intent is to stop the game from being played. Additionally, Frasca mentions that the issue with this type of ephemerality is that it is generally "easy to hack" and therefore not irrevocable, as *Agrippa* amply proves (Frasca, "Ephemeral Games").

More effective is the method of keeping the game on a server that players must access to play. Thus, the developer has control over who can and cannot play the game. Additionally, because the player has no part of the game saved locally, they do not own the game, or their experience playing it. All of this is subject to the existence of the server, and if it is lost, the players have not lost a game, they have only lost access to a game. Unfortunately, just as any player may buy a new copy of a game that has erased itself, any player may make a new account when they a barred from their own. Players would not due this, however, if they felt an ownership over the events of their gameplay.

There are ways to ensure that a player is completely banned from accessing the game, but they would have to be so heavy-handed to be effective that few players would play. For instance, any player may have more than on email to register or IP address to access from, but they only have one social security number or set of fingerprints. A more reasonable demand might be geolocation: determining a player's location and banning the game from that area. But this approach potentially bans everyone else nearby, and the player can always move to a new location. Similar issues are raised by Frasca, who points out that with this setup players would still be able to play the game multiple times – in his situation, it would mean buying multiple tickets to be given access, or registering from different locations.

The most effective way of making every experience in a game truly irrevocable is to only hold a real-world event for players to access the game. Like the previous example, no player gets the game directly, they are only given limited access. But instead of hosting the game on a server, the player must come to the developer, or an overseer of some sort to play the game. Thus, the event organizers can personally watch every player to make sure that there are no repeats. And when the event is over, only the developer still has the game. Thus, by personally meeting and allowing every player to play the game to completion only once, the game is completely and truly irrevocable. Events like this, Frasca notes, are the only method of keeping a game irreversible, because they only happen once and they force the player to think seriously about the decisions they make.

Following this, we can make a "real-world" analog of another event: sports. A sporting event, while seen by many fans, cannot be changed. A notable success or failure can be remembered in the history of the sport because it can never be undone. It can be re-watched, but this is much like *Free Will*; the game or its highlights can only be seen, not changed. This eliminates the secrecy inherent in enforcing irrevocability, and it does so by creating a game within a game. Baseball itself can be played over and over, but a single instance of it is irrevocable. There are organizations of matches in video games as well, the games that are played are not irrevocable; a single match is irrevocable because the participants agree to accept the finality of the results.

It is interesting to see that sports, physical or digital, are irrevocable because the players accept the outcome of a play session as history, whereas other methods focus on restricting the number of people to see a game. That is, the outcome and all of the events in an instance of the game leading up to that outcome are only irrevocable because of the players and spectators who all agree about how that game was played.

Making an Irrevocable Game

Irrevocability in games can be quite hard to pin down as there are many variations on irrevocability. What makes an irrevocable game worth the experience to play? Is it just simply the fact it cannot be played again? If the mechanics of irrevocability are thrown into a game just for the sake of irrevocability then it is a gimmick – novelty to added to the game for an additional bullet point on the box. When does an irrevocable game have an experience worthy of playing?

For digital media to have irrevocability as more than a gimmick it must be grounded in its irrevocability, like *Agrippa*. This ensures the mechanics are justified by the game; in *One Chance*, the player only has one chance because the character only has one opportunity to get it right. *Agrippa*, being a poem about the ephemeral nature of memory, erases itself as each line leaves the screen. These games and other forms of interactive media serve as the ultimate forms of irrevocability, both in mechanics and in story.

Contrast this with games such as *Diablo II*, where the option for irrevocability – not even a major game element! – is in a hard-mode setting. In this instance, players are able to play through the game with increased difficulty and permanent death. This is tacked on as an extra feature to allow players to rank their skill; were they able to descend through the dungeons without dying once?

In order to be a truly irrevocable experience, the game should seek for the player to have a sense of ownership over the ending, such that any other difference would ruin it for them. *Heavy Rain*'s intent, as per the creator, was for this reaction; players should be able to go through the game and get a story which is theirs and not look to cheat themselves out of a unique experience. To make this game the developers must ground the game's irrevocable mechanics, whether it is self-erasure or the inability to replay, firmly in the game's intent.

Hypothetical Game Treatment

One way to study irrevocability is to try and create a game which emphasizes the best points of past irrevocable games. It is the position of this paper that, in order for games or interactive media to be truly irrevocable, they must have an underlying theme of irrevocability, such as the case of *Agrippa*. The game must also have features of irrevocability, which includes never being able to play the game a second and never having the same experience again. Additionally, if the game is based in irrevocability, the player must have the ability to lose something in the game for good and not be able to reclaim it at a later time. With all of these in mind, a hypothetical game treatment for a game named *Descent* follows.

Descent

Game Summary:

Descent is a single player game meant to be only played once. Taking on the character of an old man, the player makes his or her way through a house where each room details a memory. As the man leaves each room it is forgotten to both the character and the game – the room and its memory are erased and cannot be reclaimed. The player moves through the house until he or she becomes trapped by forgetfulness.

Concept:

The game models the descent into later stages of Alzheimer's disease and the inability of the afflicted to regain their lost memories. The player starts off the game inside of a house with no recollection of how the character got there – there is no back story, just doors leading to the next rooms. As the player moves through different rooms and floors of the house, different memories are presented. When the player leaves a specific room, it fades from memory and from existence on screen.

Gameplay:

The player walks through a house with a *Metroid-Castlevania* style room layout, where rooms can be reached through multiple means. The novelty of *Descent* is these rooms, once the player leaves, cannot be returned to, like *Agrippa*'s self-erasing per line. It is possible for the player to get stuck in the house with no means for escaping. If this is the case, the game ends and the experience is terminated with the character having lost enough of his surroundings to descend into total dementia.

It is the goal of the player to make his or her way through the house and try to reach to reach the roof without trapping himself or herself. For example, a room containing the memory of sounds can cause the player, on exit, to lose the ability to discern sounds correctly. A dog running past may meow, or someone screaming about a fire will be interpreted as a summons. This can be expanded to forgetting memories such as a loved one, family members, places, or an object's functionality. This will allow each player for a unique experience due to the fact their descent will be different than others playing the game, and each room will interact with the others in different ways.

The true end of the game will be when the player has managed to get up to the roof, which is only accessible through a certain staircase. The last room that is presented to the player before the roof is a very powerful memory, one that brings the character to his knees. After leaving the room, the character will have forgotten how to walk and will be crawling up the stairs and onto the roof. When the player reaches the roof, there is only one way left to crawl, and that is off of the roof itself. If the player chooses to walk the character off the edge, he or she will see the house fade as the character falls until the entire game fades away.

Room Examples:

Roof

This is the last area the player is exposed to. By the time the player has reached this step, they have gone through a portion of the house and have lost different memories. The last memory the character will have lost will be the memory and ability of walking, so that when the player reaches the roof the character is crawling in a devastated scene. There is only one way off of the roof, should the player choose to make the character descend.

Park Area

This room is, while in the house, located outside. The character is in a park with a pond and a light breeze floating through the trees. A blanket is set up nearby for a picnic. Should the player have already forgotten his or her loved one, then the loved one won't appear on the blanket. If sounds have been forgotten, the various animal noises will be confused and the words out of the loved one (if he or she is there) will be muddled or garbage.

Daughter's Room

This is the room of the character's daughter. Various items can disappear based on previous rooms, such as awards, pieces of artwork, and other trinkets. If the daughter has been forgotten she will not appear in this room. The memory of the room remains – however, if the memory of the previous house is forgotten, this room will cease to exist. Should the player have already visited the room of color, this room will be strange shades of brown and green as opposed to its general pink color.

Arrangement of Rooms

The rooms will be arranged so as the player descends the memories will become less recent. This is to keep with the Alzheimer's concept – Alzheimer's patients often suffer from losing the most recent memories first. Additionally, nearby rooms will be connected by some detail, regardless of how strong the connection. A room set in a park with some geese might be connected to a children's room because there is a painting of geese on the wall. This will ensure the player is some underlying link between the rooms – a flow the player can see and understand.

Character

The character in the game is an elderly man who is exhibiting symptoms of Alzheimer's. Left in a house alone, he wanders up to the roof and forgets why he is up there. A short, frumpy man, he is uncertain and slow-moving, which allows him extra time to take in the sights and memories of his large house.

Irrevocability

The irrevocability in this game is trifold. The overall irrevocability is the distribution of the game. In order to be truly irrevocable *Descent* would have to be released at an event – a panel at a convention or a showcase. Secondly, the rooms will erase themselves as the player walks out of one and into another. The player will be prevented from returning to a previous room as the code for the room will have been wiped. Lastly, the game will be irrevocable in that it will try to make players not want to play it again – they should feel ownership over their ending and not seek to devalue that experience.

Plausibility of Irrevocable Game Creation

Would a game which implements irrevocability as more than just a gimmick be played by the masses? Having seen true irrevocability being limited to a few games and interactive media, such as *Agrippa* or *Sub Mission*, would a game need to lower its standards on irrevocability in order to justify its creation?

While it is true most games which implement irrevocability do so as an addition, like *Diablo II*'s hardcore mode, the games implementing true irrevocability do have their players. It is the position of this paper that irrevocable games can be made, and made so gamers will play them. With the gaming community as it exists today, word can spread about a unique game faster than it would have a decade ago. This is how several indie games are popularized; for examples one can look to *Minecraft*, which passed via word of mouth and generated two million dollars worth of sales before the first official release candidate. *Lose/Lose*, an art game, has over 1500 different high scores, and those are just people who have played the game and submitted high scores. Making a video game with irrevocability and finding people to play it would not be an issue.

A better question is to ask if the irrevocability in the game works as intended. Players who are committed – as they would most certainly have to be – would only play the game the recommended one time. There would always be controversy over the one-time play; players would want to play it again to see what they had missed and would try to circumvent any restrictions on the game which prohibited them from doing so. But the majority of the target audience would take the irrevocability to heart. The irrevocability aspect would leave a lasting impact for these players, who would in turn spread the word of the game to their friends and to the internet community, further promoting the game.

With this in mine, it is plausible to make a game with irrevocability which would be played by the target demographic. Would it be as successful as *World of Warcraft* or *Halo*? This is probably not

the case; irrevocability in games is a niche market, as demonstrated by the small number of games shown exhibiting irrevocable elements. This may be because of the inability of past games to completely incorporate irrevocability in a balanced manner.

Conclusion

As previously mentioned, truly irrevocable games contain a balance of gameplay and story aspects in their irrevocability. None of the past irrevocable games in this paper completely execute this balance. The missing element which makes irrevocable games interesting is the ownership, created by this balance, which a player feels towards their experience. Not only should a game inhibit the gamer from playing it again, it should also provide a reason for him or her to avoid replaying it.

Descent attempts to take this thesis and put it into practice. Players should, upon completion of their experience, walk away with that experience and not seek to explore a different one. *One Chance* attempts to do this but suffers from a lack of balance – in this case, story overpowers gameplay. This contrasts with *Descent,* which uses the gameplay to keep the player constantly moving forward, removing the ability to revisit previous rooms while explaining with the story that the character is losing his memory.

Ownership of the experience is the missing element of irrevocable games. It provides the player with a connection to his or her unique story with the interactivity that digital games grant. Because of this ownership the game has a deeper meaning which is lost with successive plays. Future developers that wish to create interesting irrevocable games must seek to create this sense of ownership by balancing the story and gameplay aspects.

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