

Episode 2 Part 2: Practical Necromancy

Some games are dead or dying.¹ *horror scream* But, we can still save many of them or bring back others to life. So get your Phoenix Downs or start casting your resurrection spells. *intro fade in song* Let's go! *intro fade out*

Hello and welcome to Deadplay, a podcast on videogame preservation and analysis! My name is Dany Guay-Belanger, and I'll be your host. Last time, we talked about how games can die. Today, we move on to ways to prevent their death or bring them back to life.

Thinking about this made me think of two things: Star Trek and HP Lovecraft. In the Star Trek Original Series episode *What Are Little Girls Made Of?*, a scientist wants to transfer the consciousness of human beings into androids.² This raises interesting questions: would that android still be considered a human being, even though it can't suffer from biological diseases? Or if the android version could be reprogrammed without the source human's bad character traits? Maybe not, but there would still be some of what made that person who they were in that android. This idea is also explored in H. P. Lovecraft's take on the zombie trope in *Reanimator*,³ where reanimated corpses hold on to the person they were while they were still alive, but to varying degrees. They are clearly different, but the fresher the corpse was when the reanimation process started, the more the zombie holds on to the person they were before death. I think in both these examples, the new non-human entities are only shades of their former selves, but they still hold on to the aura of who they once were. And I think this also applies to videogames.

For games, we can't really talk of freshness per se, but you could make the argument that some zombie games are better preserved than others. If we take *Night Flight* as an example again; if its cassette tape can't be read and there is no way to play the game – no emulation or recording – the game is dead. But if there is an emulated version and recordings, then it would be a zombie

game. The better the emulation and the quality of the recordings, the “fresher” the zombie. So, when all the original cartridges of *Mario Bros.* or *Sonic the Hedgehog* die, since there’s a plethora of emulation, they’ll be well preserved zombies. If, however, there was no recording of the game and only one emulation that barely worked – like if the sound was off, the controls didn’t work well, and some levels couldn’t be played – that would be not be a “fresh” zombie. In that case, the game would be that zombie lying on the ground, cut in half, and so decomposed it can’t even crawl anymore.

Aren’t there many types of zombies though?

Yeah, the zombie myth has a lot of variations.⁴ George A. Romero’s version is not the same as the *corps cadavre* of rural Haiti,⁵ or even the Undead in *World of Warcraft*. There are many interpretations of the zombie myth, what it means, what it represents. There’s some literature that argues that media using zombies are representations of masculinity or colonialism.⁶ Though those are solid and valid arguments, that’s not why I use that metaphor. I chose the zombie metaphor because of its exploration of life, death, and undeath. Also, the fact that they are typically portrayed as mindless, flesh-eating monsters is irrelevant here. The useful thing about zombies is the notion of bringing things back to life and how much the zombies resemble what they were before their death, like what happens in *Reanimator*. On a more personal and trivial note, I’ve always been fascinated with the concept of undeath. Zombies terrified me as a child, but when I could play a character that raised the dead in a videogame, I would always go for it; I still do.

Okay, zombies are brought back to life; but they’re not *really* alive.

You’re right, they’re not really alive, they’re kind of half alive? This is where the zombie metaphor works particularly well with emulation. Emulated games are rarely perfect, they have issues – the sound might be off, playing the game on a keyboard and mouse is not the same, etc.⁷

Almost like a zombie who's missing body parts. In effect, an emulated game, even if it's done perfectly, is not the same as the original. So, a game for which there's only an emulation left, is kind of a zombie game. Unless you have a functional, 'original' copy of a game, it'll be a zombie. If you do have a functional, original copy, it's not really a zombie yet, it's more or less in a half-life state. Then again, eventually, the original will deteriorate to the point it won't be readable anymore and die. Games can and will die. It's only a matter of time. The Apple II version of a game, which might or might not be the original, can and will die. Same thing for the Atari one or whichever version.

So, if specific versions will die, how do we keep them alive or bring them back to life?

Remember when I said that the essential idea of a game can survive, even if the corporeal, physical medium dies, and that every part of a game is meaningful and tells us something about the game itself? That essential idea of the game, that major theme, can be seen in all of its components beyond the cartridge and code. Remember that for us the 'game' extends into its hacked versions, its modded versions, its fanficified versions. Is fanficified a word?

Probably not.

Meh, whatever, now it is. Anyway, we can use many of those, if not all, to bring games back to life. Basically, it's an exercise in practical necromancy. Multiple versions of a game might be dead, the original hardware might be impossible to find or the only ones that are available might be broken, or the emulated versions of that game might be only a shade of the original. However, if we can't find or use the original, or some other version, these parts of the game are the best thing we have. We can piece them together to recreate the game. There's an interesting Black Mirror episode entitled "Be Right Back" that touches on something similar. A company uses public social media profiles, personal emails, pictures, whatever, to recreate someone who passed away. The

more information they have access to, the more accurate the copy. But it's not quite the same. At first glance, it's the original person, but when you dig a little, it's clearly not. While we can reconstruct a game using the various parts available to us, it can only result in an imperfect copy. However, the various parts of a game can tell us things that even the original might not be able to, like the communal or competitive aspect of a game.

Yeah, you keep saying that every part matters and you created a typology, but what's the worth of all that if you don't apply it?

That's fair, and it's something I kept thinking about as I was doing my research. So, I settled on two games I found in the Canada Science and Technology Museum's collection: *Joust* and *The Seven Cities of Gold*. The way I'm going to structure this is slightly awkward, but I think it's the best way to keep it clear. I'm first going to talk about the games individually, what drew me to them, and what makes them unique in terms of preservation. Then, in the next episode, I'll talk about the future of videogame reanimation.

Act 1: Joust

Joust is an arcade action game that originally came out in 1982 and was published and developed by Williams Electronics. It was also released on Apple II and Mac, several Atari consoles; the NES, PC, the GameBoy, and more recently on the Palm OS and the Xbox 360.⁸ In that game, the player takes control of a knight riding a flying ostrich, or a stork if you are player two, and they fight evil knights who ride vultures. Basically, you flap your mount's wings to fly and you have to hit your enemies from a higher jousting point to defeat them.⁹ I posted footage of different versions of the game on deadplay.net, so you can see what it looks like there.

One of the things that drew me towards *Joust* was the novel *Ready Player One*.¹⁰ The book takes place in 2044, where overpopulation, climate change, and wealth inequality have drastically

worsened. The poorest people live in stacks of RVs and trucks converted into housing. In *Ready Player One*, most people play an MMORPG called OASIS, accessible through virtual reality gear. The creator of that game died but didn't give away his fortune to anyone in particular. Instead, he created an egg hunt and the first person to figure it out will win his fortune. There are multiple challenges for players and one of them is to play *Joust* against a lich; which is, for those who don't know, a type of undead creature. The author, Ernest Cline, spends a lot of time describing the game – how to play it, its graphics, the context in which the game was played, and so on.

It gives us a basic understanding of the game itself and its social context. Of course, this is not a substitute to playing the game itself, but it does tell us something about that game, and how the author remembers it. *Ready Player One* kind of feels like an exercise in fanboy nostalgia, but it does it well. I would also like to mention that the book was adapted to film.¹¹ I have no idea how the film adaptation treated *Joust*, but I'm very curious. I think it's safe to say that many younger spectators won't have experienced the arcade version. The XBOX 360 version came out in 2005,¹² but, most likely, for people born around 2000, the movie will be their first and only contact with *Joust*. For me, this means two things. First, the book and the movie are helping to reanimate that game. Second, they might trigger interest in that old game. And maybe, just maybe, some people will want to play it or will want a reboot.

The other thing that drew me to that game was the fact that, originally, players were not supposed to ride ostriches – they were supposed to ride eagles.¹³ When I started my Master's, I was studying American foreign policy and how it was portrayed in videogames. My project evolved, and I became more interested in game preservation. But even then, I thought I might be able to bring in my passion for American foreign policy. Since the eagle has interesting symbolism, – you know, the bald eagle – and since this was an American made game I thought that I might

be able to talk about that. Sadly, I couldn't dive into that, but I can at least mention it and hope that someone becomes interested enough to research that. Maybe I can do it in the future, who knows?

In any case, it so happens there's two copies of *Joust* in the CSTM's collection. One was an Atari cartridge which came with an Atari 130XE. The other one was a 5 ¼ floppy, which came with an Apple II computer and is an unauthorised copy. The Apple II version was part of the box full of unauthorised copies I mentioned in episode 1 part 1. At the risk of exaggerating, that box is basically Science and Tech's videogame collection. Anyway, I opted not to play those versions.

Why not?

Science and Tech is still making sense of the videogames in its collection. And sometimes powering up old machines can break them. I got to try other games when I first started going through all the ones in the collection; they had two Nintendo DS lite with a bunch of games. Because those consoles were recent enough, there wasn't a high risk of damaging them. But powering an old Apple II or an Atari 130XE, that's a different story. When you plug in old, poorly maintained electronics, the capacitors can blow and cause irreparable damage to the whole machine.¹⁴ So, instead of trying to get the museum to agree to let me try the versions they have, I opted to travel to places I knew had functional versions. I went to Montreal to visit LUDOV, the Laboratoire Universitaire de Documentation et d'Observation Vidéoludiques, and to the Strong Museum of Play, in Rochester, New York, to find functional copies of the game.

I was very lucky to be able to play multiple versions of *Joust*, and all of them are slightly different. For example, LUDOV had the Atari 2600 and 7800 versions; which came out in 1983 and 1987, respectively. The controllers and graphics were very different from the original arcade version. Actually, the arcade version, which I tried at the Strong Museum of Play, had better graphics even though it came out in 1982, before the two Atari versions I tried. I put up pictures

of the consoles and their controller, and some video footage on the website for those who want to see it.

I had a ‘eureka!’ moment when I tried out the *Joust* arcade version at the Strong. Remember, I had never played the arcade version before; I only knew it through some of its ports and re-releases. It so happened that while the people there were preparing the different versions I wanted to try, I got to read a strategy guide that gave tips on how to play *Joust*. It was called “How to Win at Video Games: Complete Strategies for Top Arcade Games.” Just the fact that *Joust* was in that guide shows how important the game was at the time. The book mentioned two interesting things. The first was about the various settings of games. It even had a chart with the different possible setting for the number of plays possible, points needed for bonus play, level of difficulty, etc.¹⁵ By the way, The Strong’s arcade was set at the fifth level of difficulty. The Internet Archive has a digital copy of the strategy guide; I made a copy of it that you can find in the show notes for the podcast. The second thing was what the book called the double-flap technique. It’s basically when you use two fingers on the flap button that makes your ostrich fly.¹⁶ I wrote it down in my notes and forgot about it. But when I started to play *Joust* on the arcade, I remembered. So, I tried the technique, and it worked so well!

Some of these tactics are sometimes coded in the game itself. To find out if this was the case for *Joust*, I’d have to do some in-depth code archeology. While it’s out of the scope for this podcast, there’s plenty of literature on the subject. It’ll be in the show notes. Books like “How to Win at Video Games” are an example of the social aspects of these games. People talk about games and tactics constantly. Most gamers share those, and when I was a child, the schoolyard was one of the best places to trade those “secrets”. Most of my interviewees shared this experience. Then

again, the double flap only worked with the arcade version, because when I tried a Game Boy version, it did not work at all.

Do you think the arcade version will die? How can we play that version if it does?

The arcade version won't last forever. That's why emulation is one of the best ways to bring back games from the videogame afterlife. Now, to make it better, we can't only have a version that uses a keyboard and mouse. There needs to be controllers that are close the original ones too.¹⁷ Games are more than digital, they are also physical things. So, ideally, we would preserve both type of controllers! Emulating games on a computer is like playing a game on any other platform, controls will vary. I could go on and on about the differences in controls, graphics, and all the other variations, but this episode would be way too long and so, so boring. In my opinion, seeing and experiencing the differences is much more useful than hearing me describing them here. That's why I put some footage and screenshots of the various versions of *Joust* on the website. I also put up links to some interesting websites, notably to the International Arcade Museum Library. According to their "About" page, it's "the world's largest museum of the art, inventions, and history of the videogame, amusement and coin-operated machine industries."¹⁸ They have a lot of really good information, pictures, videos, instruction manuals, you name it! So, go on deadplay.net... please?

I'll think about it.

The last two things I want to mention before I move on to *Seven Cities of Gold*, is that the Strong had some amassing documents on *Joust* that I want to mention. The company who developed *Joust* was Williams Electronics, which also made pinball machines. So, they actually made *Joust* pinball machines. There was even a two-player one where players faced one another.¹⁹ I put up links to the pamphlet for the machine and pictures of the machine itself on deadplay.net.²⁰

The other thing is they had documents for a pitch for a *Joust* reboot called *Joust-Avengers*. The game was never made, and according to unseen64.net, apparently cancelled due to quality issues.²¹ I use that website, because while I saw the pitch at the Strong and I can talk about it, I can't share any pictures. The pitch had some sketches that you can see on [unseen64](http://unseen64.net). That website finds a lot of what they post online, using Google, but they also source some of their "media privately from sources that were close to projects; former employees, artists, etc."²² I have reservations about sources like these because sometimes they can get stuff wrong. For instance, they call the game *Joust 3D* instead of *Joust-Avengers*. But since the sketches they posted matches what I saw in the Strong's archives, I'm confident it's the same game. In any case, what really caught my attention was a particular line in the pitch. It said that, and I quote, "JOUST-Avengers combines the cutting edge technology, stylistic visuals, and simple smash into'em game play into one package. It's a fast flying-fantasy action/RPG! The ONLY game with a 'Flap' button in 2001!"²³ I'm not sure why, but to me that's really funny and I wanted to share that. More seriously though, reboots typically try to keep some sort of continuity with the original. So, that pitch is an interesting example of how sequels try to keep the aura of a game alive, while making the new game different.

Joust is more than just an arcade game. It was an idea that infected living rooms via consoles; movies via nostalgia; taverns via pinball. To me, all of this is so very interesting. It makes me want to dig deeper, but I can't. Not right now at least.

Act 2: Seven Cities of Gold

Seven Cities of Gold (SCOG) came out in 1984 and, like *Joust*, it was released on multiple platforms – on the Amiga, Apple II, Atari 8-bit, Commodore 64, Macintosh, and PC. It's an exploration game, where the player embodies a 16th century Spanish explorer sent by the Spanish

Crown to the New World to claim land and riches. According to Tristan Donovan, in his book *Replay: The History of Videogames*, the game was inspired by Spanish Conquistadors. It “condensed the history of discovery of the New World into a videogame and sought to convey the panic of being lost in the uncharted wilderness.”²⁴ The theme of SCOG is exactly what drew me to it. I mean, I’m a historian, this is a historical game. I was also born and raised in a white settler context and Indigenous rights advocacy is very present in the news right now. Plus, my previous focus on American foreign policy used the framework of imperialism to discuss the more recent behaviours of the American state internationally. That game ticked all the right boxes for me.

Now, *Seven Cities of Gold* might not have a new audience like *Joust* does with *Ready Player One* the book, and *Ready Player One* the movie. But it influenced many gamers at the time and game developers. Notably, *SCOG* inspired Sid Meier to create *Pirates!*²⁵ and eventually *Civilization*. The legacy of *SCOG* might not be as obvious as games like *Doom* or *Civ*, but it’s still there. Its aura is still part of modern videogames, even if only faintly.

Did you get to play it?

Kinda? The Strong had a couple copies of the game I wanted to try. They had an Apple II version – the same one that Science and Tech had but this an official retail copy as opposed to an unauthorised one – and an Atari version. I wanted to try the Atari one first, but it wouldn’t work. The drive could have been the problem, but we tried another game, and it worked fine. So, the drive worked. It’s most likely a dead diskette. I moved on to the Apple II version which worked great! Buuuuut, the joystick was messed up. I could only go left, and sometimes, if I was lucky, up. Andrew Borman, the Digital Games Curator at the Strong said they knew it was broken and it was on their list of things to buy. So, I couldn’t play the game... Here we have an example of a game, in one of the best places in the world where a game could be kept, dying in front of our eyes.

Now, there is footage of that version on YouTube, so I'm posting some of those on the project's website.

There was, however, a commemorative edition released in 1993 and it's available on DOS, Linux, Mac and Windows.²⁶ You can buy it right now on Good Old Games, gog.com.²⁷ When I saw that I couldn't play the original, I bought that version. The graphics of the commemorative edition are much more advanced than the original, but some people did not enjoy it so much. One comment left on the GOG page criticizes this version quite heavily. A reviewer who goes by the name `capt_taco`, says that the game "sucks" and that, while he was a huge fan of the original, that version is nothing like it.²⁸ He claims that the "gameplay has taken at least three steps back. It's just not very much fun to play this version."²⁹ Comments like these are very useful in telling us how different versions differ. Or, if we don't have access to the original version, how the original was. It's important to keep in mind, that `capt_taco`'s opinion might be clouded by nostalgia.³⁰ For example, sometimes when you re-read a book or re-watch a movie you liked as a child, you realise that it's not as good as you remembered.

Another reviewer, `danielrpa`, gave some interesting criticism of that game. One issue was the "manual doesn't tell you how many priests/soldiers you need for each type of settlement so you need to guess. You can find this out by taking very tedious steps (and then write it down), but this guesswork is an unfun part of the game mechanics." Now this is very interesting because he started his review by saying that he grew up in the 80s and therefore had "no prejudice against old games or games with primitive graphics." However, in the 80s, it was common for games, especially arcade games, not to tell you everything about their mechanics. Danielrpa seems to have forgotten that the early games did not make it easy for players. They were expected to work things out for themselves. A lot of combos in fighting games were not written on the arcade cabinet. You had to

figure them out as you went along, and write or memorise them. This means that, somewhere, there might still exist notebooks where players wrote down those combos or the number of priest/soldiers you needed for *SCOG*. This is important because not giving a guide for combos and tactics was one of the incentive behind the social group formation that gaming promoted! Communities HAD to form in order to play the game well. Guides, clubs, online forums, among other things, were important socially because they contributed to existing communities, helped form new ones, and kept them alive. All of these can be used to resurrect these games AND provide part of the rationale for preserving them.

Danielrpa also had other issues with the game's gameplay. He said that "combat is also poorly introduced in the game," and that he "actually beat the main goals without killing a single indian", his words, "because it's just easier to do it this way."³¹ It's comments like these that activate my historian's spider-sense. The commemorative edition of *SCOG* was published by Electronic Arts' (EA) and its design team limited the player's ability to rule by force in the commemorative edition, something Ed Dille – who reviewed it for *Computer Gaming World* – points out.³² EA seemed aware that indiscriminate killing of First Nations might be viewed poorly and making the peaceful gameplay the easier choice has interesting implications. I mean, in the original you can spend your time decimating First Nations villages. Wiping out Indigenous people in a videogame is problematic, but, in a way, it's more accurate and making the peaceful choice easier feels like whitewashing history.

If I use the zombie metaphor on this re-release of *SCOG*, the commemorative edition is basically a well less preserved zombie than an emulation of the original would be. The commemorative edition is more like if a zombie had had its skins replaced and a couple limbs had been changed to make it look better. As opposed to try to keep the zombie fresh. All of this shows

how, as parts of *SCOG*, both the internet comments and the magazine article have important things to contribute. And, more importantly, how they work in tandem. *Seven Cities of Gold* was praised for being believable. Sandra Carlisle, in a review of the original version published in the June 1984 edition of *Computer Gaming World*, says that “since *SCOG* is so believable as a historical and geographic simulation, it can be used quite easily as an educational tool. It doesn’t teach, but rather allows the player (young or old) to learn while enjoying the game. My son had a great time reenacting the Lewis and Clark Expedition. Surprisingly, the amount of game time it took him to follow their path was very close to the actual historical time.”³³ So clearly, some people would inform their vision of the past with this game, something this article makes quite clear. What is even more interesting *SCOG* being believable is that the Atari version I was supposed to try had a bibliography in its manual.³⁴ So the game’s designer, Danielle Bunten Berry, did a lot of research for that game and we need investigate it! I put it up on the website.

This is the first time I’ve heard you mention a creator by name, why are you mentioning her specifically?

Bunten Berry was very influential. She won a lifetime achievement award from the Computer Game Developers’ Association and was named to the Academy of Interactive Arts and Sciences Hall of Fame. She was one of those behind *M.U.L.E.* and was an early proponent of multiplayer and online games.³⁵ She famously said during a speech at the Computer Game Developers’ Conference in 1990, “No one on their death bed ever said, ‘I wish I had spent more time alone with my computer.’”³⁶ Sadly, she passed away in 1998 from lung cancer. Her family donated a lot of material to the Strong and I had the chance to go through it. This includes handwritten pages of code, the agreements concerning *SCOG*, personal papers, some poetry, and

much more. Her story is so interesting and complex, and perhaps I'll tell it in a second season of this podcast.

Okay, but how does a profile of any creator or developer help us preserve the game?

Well like I said before, I think everything related to a game shares the game's aura. And, in a sense, the creator's aura is contained in the games they make. So, including their life stories will give better context to the game and will help us preserve it.

And are zombies relevant to all of this?

Yep, but that's for the next episode!

In the next episode, we move on to ways of preserving games common to both *Joust* and *SCOG*. Please stay tuned! I would like to thank Rebecca Baker, who is the other voice you heard throughout the podcast, and Racoon City Massacre for giving me permission to use their music. The theme song for Deadplay comes from their song "Where They Walk Alone." You can find more of their music on Bandcamp. *outro* They also have a Facebook page and a Twitter! Thank you so much and see you next time!

¹ James Newman, *Best Before: Videogames, Supersession and Obsolescence* (New York: Routledge, 2012), 1.

² Robert Bloch and Gene Roddenberry, writers, "What Are Little Girls Made Of?" in *Star Trek*, directed by James Goldstone. National Broadcasting Company, October 20, 1966.

³ H.P. Lovecraft, "Herbert West – Reanimator" in *Necronomicon: The Best Weird Tales of H.P. Lovecraft* (Commemorative Edition), ed. Stephen Jones (London: Gollancz, 2008).

⁴ See Shawn McIntosh and Marc Leverette, *Zombie Culture: Autopsies of the Living Dead* (Lanham, Md: Scarecrow Press, 2008).

⁵ James McFarland "Philosophy of the Living Dead: At the Origin of the Zombie-Image." *Cultural Critique* 90, (2015): 22-63. Also, see Kette Thomas, "Haitian Zombie, Myth, and Modern Identity." *CLCWeb: Comparative Literature and Culture* 12, no. 2, (2010): 1-9,

<https://docs.lib.purdue.edu/cgi/viewcontent.cgi?article=1602&context=clcweb> and Elizabeth McAlister, "A Sorcerer's Bottle: The Visual Art of Magic in Haiti," in *Sacred Arts of Haitian Vodou*, ed. Donald J. Cosentino (Los Angeles: UCLA Fowler Museum of Cultural History, 1995), 305-324, <https://wescholar.wesleyan.edu/cgi/viewcontent.cgi?referer=https://en.wikipedia.org/&httpsredir=1&article=1016&context=div2facpubs>.

⁶ See Adryan Glasgow, "Race. Nation. Zombie: Imperial Masculinities Gazing at the Undead," (PhD thesis, Purdue University, 2015).

⁷ Newman, *Best Before*, 140-149.

⁸ "Joust for Apple II (1983) - MobyGames" MobyGames, accessed June 2, 2018, <http://www.mobygames.com/game/joust>.

⁹ Ibid.

¹⁰ Ernest Cline, *Ready Player One* (New York: Broadway Books, 2012).

¹¹ *Ready Player One*, directed by Steven Spielberg (Warner Bros, 2018).

¹² “Joust for Xbox 360 (2005) - MobyGames,” *MobyGames*, accessed June 2, 2018, <http://www.mobygames.com/game/xbox360/joust>.

¹³ Brian R. Eddy, *Classic Video Games: The Golden Age, 1971-1984* (Oxford: Shire, 2012): 38.

¹⁴ Zbigniew Stachniak, “Notes on Software Recovery and Preservation,” (presentation, *Canadian Science and Technology Museum*, Ottawa, ON, April 25, 2014).

¹⁵ Editors of Consumer Guide, “How to win at Video Games: Complete Strategies for Top Arcade Games” (New York: Beekman House, 1983), https://archive.org/details/book_how_to_win_at_video_games_complete_strategies_62-63.

¹⁶ Ibid, 17.

¹⁷ Smithsonian American Art Museum, “Playing Pong in 2100: How to Preserve Old Videogames - Part One,” filmed August 18, 2012, at Playing Pong in 2100: How to Preserve Old Videogames, Washington, DC, video, 1:33:00, https://www.youtube.com/watch?v=g_noQCDZsc.

¹⁸ “International Arcade Museum Library - Collections,” International Arcade Museum Library, accessed June 2, 2018, <http://library.arcade-museum.com/about-library.php>.

¹⁹ “Joust,” The International Pinball Database, accessed June 2, 2018, <http://www.ipdb.org/showpic.pl?id=1316&picno=1245>.

²⁰ “Joust,” The Arcade Flyer Archive, accessed June 3, 2018, <https://flyers.arcade-museum.com/?page=thumbs&db=videodb&id=1488>.

²¹ “Joust 3D [XBOX/PS2 - Cancelled] - Unseen64,” Unseen64, accessed June 2, 2018, <https://www.unseen64.net/2008/04/15/joust-3d-xboxps2-cancelled/>. Unseen64 is a forum for game aficionados to collect and document beta, cancelled, and unseen games: games that never died because they never had a life in the first place!

²² Unseen 64, “Joust 3D,” accessed June 2, 2018, <https://www.unseen64.net/about/>.

²³ “Joust-Avengers (Midway Games) Design Initiation Packet, 2000,” Atari Coin-Op Division corporate records, Box 2, Folder 19, Strong Museum of Play, Rochester, New York, United States, 3.

²⁴ Tristan Donovan, *Replay: The History of Video Games* (East Sussex: Yellow Ant, 2010), 300.

²⁵ Ibid, 195.

²⁶ “Seven Cities of Gold: Commemorative Edition for DOS (1993) - MobyGames,” MobyGames, accessed June 2, 2018, <http://www.mobygames.com/game/seven-cities-of-gold-commemorative-edition>.

²⁷ “Seven Cities of Gold: Commemorative Edition on GOG.com,” Good Old Games, accessed June 2, 2018, https://www.gog.com/game/seven_cities_of_gold_ce.

²⁸ Capt_taco, “Save your money,” November 29, 2014, https://www.gog.com/game/seven_cities_of_gold_ce.

²⁹ Ibid.

³⁰ Sean Fenty defines nostalgia as “a yearning for a return to an irrecoverable condition” and argues that “it would not be nostalgia if a return were possible.” He continues by stating that “though we may desire to go back, we never really can. Not because the games are different, but because we as players are different. We have changed, and the games themselves have helped us change.” See Sean Fenty, “Why Old School is ‘Cool’: A Brief Analysis of Classic Video Game Nostalgia,” in *Playing the Past: History and Nostalgia in Video Games*, ed. Zach Whalen and Laurie N. Taylor (Nashville: Vanderbilt University Press, 2008).

³¹ Danielrpa, “Not very good - even back then,” June 29, 2014, https://www.gog.com/game/seven_cities_of_gold_ce.

³² Ed Dille, “New Horizons for an Old World: Electronic Arts Rediscovered *The Seven Cities of Gold*,” *Computer Gaming World* 112, November 1993, 58, https://archive.org/stream/Computer_Gaming_World_Issue_112#page/n57/mode/2up.

³³ Sandra Carlisle, “Seven Cities of Gold,” *Computer Gaming World*, June 1984, 40, https://archive.org/stream/Computer_Gaming_World_Issue_4.3#page/n39/mode/2up.

³⁴ “Atari The Seven Cities of Gold,” Video and Other Electronic Game Collections, Strong Museum of Play, Rochester, New York, United States.

³⁵ Greg Costikyan, “Danielle Bunten Berry (1949-1998) - Encyclopedia of Arkansas,” The Encyclopedia of Arkansas History & Culture, last September 26, 2017, modified <http://www.encyclopediaofarkansas.net/encyclopedia/entry-detail.aspx?entryID=4524>.

³⁶ Ibid.