Abstract

Vox in Rama is a point-and-click interactive fiction game created by Bailey Foltz for her NYU Interactive Media Arts Capstone project.

In *Vox in Rama*, you play as a cat in 1650s London, trying to prevent the rat population from spreading a new wave of the plague while simultaneously trying to avoid the persecution of the witch hunt. The game is based on real historical events regarding the treatment of "familiars" during witch hunts in England, the corresponding decrease in the cat population as they were similarly linked to luciferianism, and the responding increase in the rat population which was theorized to be a significant factor in the emergence of the Great Plague of London in 1665. *Vox in Rama* is an interactive story created for entertainment, the lighthearted narrative approach allowing the user to take part in the storyline while also engaging them in a retelling of historically based events and demonstrating how unexpected factors might lead to significant outcomes. The game is available to play on the browser on itch.io.

Introduction

Vox in Rama began with its storyline, which remained the heart of the game throughout its development. The intersection of two historical events, the Great Plague of London and the English Witch hunt, guided my initial research and the eventual structure of the game. This particular cat-related theory which tied the two together I first read in an article in the LIFE Cats magazine. The article briefly introduced me to the unexpected butterfly effect of these events, and I did corresponding research on this and other contextual subjects in order to create my story. The original pitch from my sister, Shipley, was for the story to be developed into a Wes Anderson stop-motion film, similar to Isle of Dogs, but for my own approach a point-and-click game felt more appropriate.

Historical Background

Vox in Rama, the title of this game, was also the title of a law made by Pope Gregory IX in 1233 condemning the heresy of Luciferianism and authorizing action against it, and was the first official association of cats with witchcraft or satan. The law was made in response to rumors of satanic cults throughout germany, and addressed one cult in particular, which was revealed by inquisitor Konrad von Marburg to have worshiped the devil in the form of both a man and a black cat, even describing the man's skin as "coarse and covered with fur like a cat." (Sheldon). This decree did not directly command the persecution of cats, but began the process of reframing the cat from a pagan sacred animal into a vessel for the devil.

The English Witch Trials were primarily conducted from the 15th to the 18th century, and were most intense during the mid-17th century in the 1640s and 1650s. In 1601 the Witchcraft Act

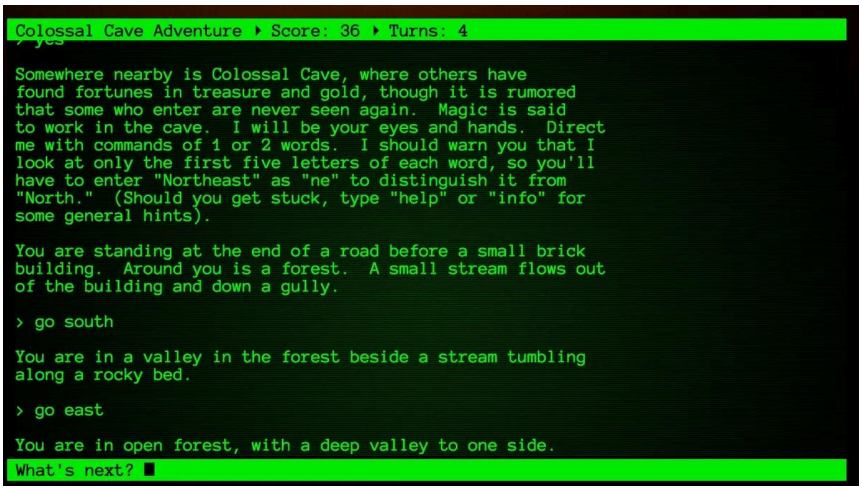
was reformed to sentence anyone who had made a pact with Satan to the death penalty. It is estimated that these witch trials resulted in the death of about 500 people, 90 percent of whom were women. The first recorded witch trial in which explicit reference is made to the witch's use of a "familiar", a supernatural entity usually manifesting as an animal that would assist witches in their magic, is that of Dame Alice Kyteler in 1324. As the witch trials continued around the world, "the presence of the familiar in the witch trials [remained] an almost uniquely English phenomenon" (Parish). Cats were only one type of animal often accused of being a familiar, and mice, dogs, or even toads were other likely perpetrators. By the 17th century, "lurid details of the interactions between a witch and a familiar had become a commonplace in English witch trials and the popular print literature that accompanied them" (Parish). Cats were especially demonized, their teeth said to be venomous, their flesh poisonous, their hair lethal and their breath infectious, folklore likely coming from a combination of their association with witchcraft and Satan as well as, possibly, undiagnosed cat allergies (Life Cats). While the presence of a familiar was not required for a witch to be accused or put on trial, they were still at times prosecuted as material embodiments of the demonic pacts, and killed as they were considered vessels for Satan. When these lingering attitudes from the witch trials overlapped with the Great Plague of London, people blamed animals such as cats and dogs before they blamed the rats, and as Daniel Defor reported in 1722's Journal of the Plague Year, "It is incredible… what a prodigious number of those creatures were destroyed. I think they talked of forty thousand dogs, and five times as many cats" (Life Cats). These attempts of ridding the London population of the plague may have been counterproductive, as the decrease in animals like cats meant less predators to control the rat populations, the vermin who were more actively spreading the plague throughout the city.

The Great Plague of London, the last major epidemic of the bubonic plague in England, lasted only 18 months from 1655 to 1656 and took out almost a quarter of London's population. This instance of the plague was part of the 'Second Pandemic', an outbreak several centuries long of the Black Death which began in 1347 and lasted until 1750. This is known as the deadliest disease outbreak in history. The Great Plague of London was endemic, restricted mostly to the 448 acres which had been surrounded by the city wall. The city was accessible through seven gates; Ludgate, Newgate, Aldersgate, Cripplegate, Moorgate, Bishopsgate, and Aldgate, and was bordered on one side by the Thames which was crossable via the London Bridge. London at the time was overcrowded with very little sanitation, open drains flowing along the streets and almost no waste regulation. The outbreak of the plague, transmitted through bites from fleas or lice, can cite the presence of rats in these unclean environments as one of its primary causes. While it is also true that cats are just as capable of carrying disease-ridden fleas or lice as rats are, they also do not reproduce quite as much as rats do, nor did they spend as much time congregating in the recesses of residential buildings. Insect bites were not understood as a cause of the plague until the 19th century.

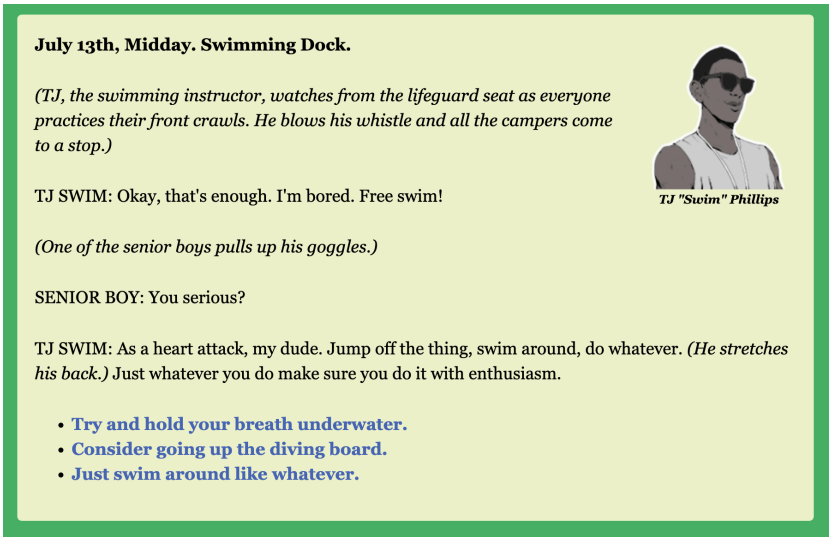
Point-and-Click Games

Point-and-click games, commonly point-and-click adventure games, are those in which the user interacts with the interface of the game using a computer mouse or other pointing device to point at parts of the interface and click them. Sometimes, additional control schemes may be available, such as using arrow keys to move the character around a space, or using the keyboard to spell out commands, but the main point of interaction is the point and click of the mouse. The user will control a character, called an "avatar" which will typically be a fleshed-out character with past experiences, personality traits, and motivations outside the user's influence, to interact with other non-player characters.

Interactive fiction is an interface in which users use text commands to control characters and influence their environment. The result is a digital version of a 'choose-your-own-adventure' story, and while these works may be understood as mainly literary narratives which are formatted for a digital space and include user interaction, they may also be primarily considered as adventure games that just have a more narrative, textual focus. The first ever work of interactive fiction, *Colossal Cave Adventure*, was created in 1976 by Will Crowther, inspired by the exploration of the Mammoth cave in Kentucky, the longest cave system in the world, and the role-playing board game dungeons and dragons. In *Colossal Cave Adventure*, the main point of interaction from the user is a box into which the user can type one or two word commands to move their character around the cave system and interact with their surroundings. Many other interactive fiction games such as the game *Birdland* written in 2015 by Brendan Patrick Hennessy, do not employ the command-entry interface, choosing instead to present the user with several choices of commands and allowing them to choose one. This allows the user to choose entire sentences with which they can respond to the non-player characters or decide on complex actions, impacting the influence the user has over plot. *Colossal Cave Adventure* is commonly cited as the first known example of an adventure game, and although the development of technology and growing game industry has given current adventure games much more complexity in terms of interaction and appearance, the line between these two types of games is blurred, and their common origin shows how much both genres value the game's narrative and the influence that the player character has over the narrative. For both genres, choice is a crucial aspect, allowing the games to "experiment with both the plot conventions of traditional, non-interactive narrative and with the gameplay conventions of the videogame medium" (13).



Colossal Cave Adventure, 1976



Birdland, 2015

Poptropica is a children's online role-playing game developed primarily by Jeff Kinney in 2007, and while this game is much more point-and-click than it is interactive fiction, the importance of both narrative and choice given to the user is relevant both to the genre and to the development of my own game. In *Poptropica*, users move to different 'islands', each of which has its own problem that needs to be solved through having conversations with non-player characters, collecting and using items found around the map, and completing a series of smaller puzzles. While games like *Poptropica* offer much more complicated visuals and opportunities for user interaction, many of the core aspects of these point-and-click or point-and-click-adjacent games are similar to the seemingly simpler text-based fiction games.

Poptropica

Point-and-click games also provide notable opportunities for learning, both through their narrative and through the problem-solving process throughout. Hypertext fiction and interactive browser-based content are debated areas of literary studies, but there are many studies showing that significant, powerful learning can happen through gameplay. While *Vox in Rama* does not prioritize educating the user on historical events, the historical basis and research-informed storyline do make the possible educational benefits of computer games a relevant topic. Computer games are the most popular form of fiction consumed through the computer, and yet have often been ignored by the humanities community for many reasons. Often, these games have an adolescent target audience, and there are many assumptions that video games have with violence and sexism, discrimination, and the general amplification of negative social values. It is also often difficult for traditional disciplines to find places for new or alternative media. Alternative literacies such as “chat rooms, internet, comic books, cell phones, blogs, trading cards, zines, film creation, and video games” are often seen as unsophisticated, not allowed to be considered literature or art (Sanford & Madill). To many, interactive and hypertext fiction is still new and unknown. Interactive fiction, however, has been around since 1976, and even then was not necessarily a new genre of game or literature, but rather a type of “meta-media” which combined existing media types, or used new mediums to show types of narratives that had existed long before hypertext fiction was introduced. Combining this literary content with an interactive game format combines multiple complex literary skills into one activity , allowing for “action and interaction of values, dilemmas, and decisions" (Sanford & Madill, 438). *Poptropica*, as one example, often takes advantage of this engaging format to teach kids about different subjects such as historical events, mythological legends, and even the science of viruses through their differently themed ‘islands’, allowing the active engagement with the game to aid in the absorption of this new information. In our increasingly digitized world, forms of literature such as hypertext fiction provide types of learning that are not available in more traditional mediums, considering learning not just as a language system, but as a cultural system. The involvement that choice-based games require, as well as the unique understanding which is required of the symbol and language system specific to video games make games a valuable source of literary or educational media which engages its audience in order to promote learning.

Growing up, I was an avid user of games like *Poptropica*, spending impressive amounts of time posted at the family desktop in our living room, and even with the stories already told and the puzzles already solved I still often return to these games out of nostalgia even though, like many other browser-based games, a significant portion of the game was rendered unplayable by the loss of Adobe Flash. Many of the browser-based games I used to play and the storylines I had grown attached to are now completely unavailable. As technology develops, the content we have access to does not only increase, but often fluctuates.

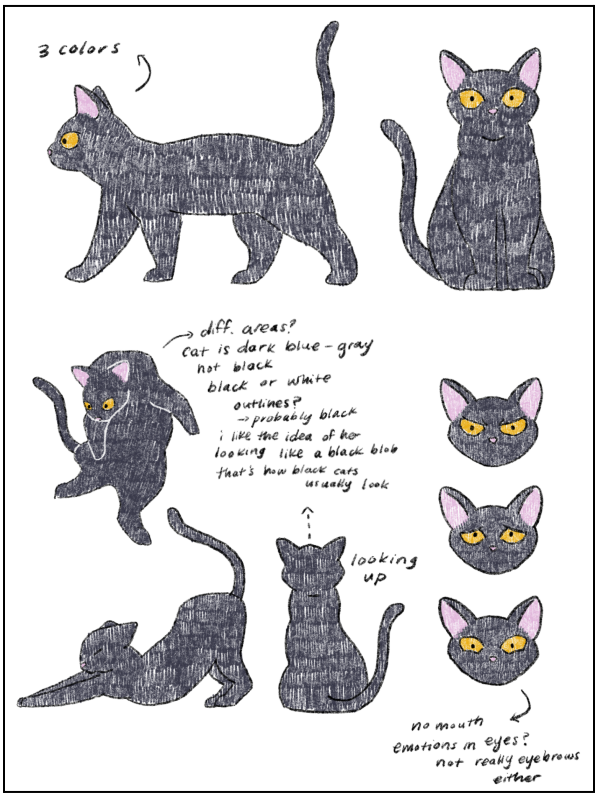
Methodology

In Vox in Rama, the user moves through the seven gates found in the walls of London, at each of which a cat "guard" is stationed, traveling between them via the tunnels winding underground. The responsibility of this "guard" is to monitor these openings in the wall in order to prevent unwanted visitors from coming into London. The user is tasked with convincing each guard to prepare for the incoming plague-carrying rats and to properly prevent their unwanted entry. At each gate a dialogue must be had with the guard stationed there, and at certain locations additional actions, such as assisting the guard with a task or fighting off a diseased rat, will be required to 'convince' the guard to join your mission. At certain points throughout the game, the user will also run into the human soldiers who are going around London rounding up suspected witches as well as street cats. When faced with these soldiers, the user must strategize their way out of the soldiers' detection. After the user has gone to each of the seven gates, the game concludes at the London bridge, the last entry point into London where the cats must fight off a final wave of diseased rats.

Vox in Rama was created using the game engine Adventure Game Studio (AGS). AGS is an open source development tool built specifically to facilitate the process of creating graphic adventure games. The engine combines a file-insertion interface with a scripting language based on the C programming language. The program, created by Chris Jones and originally released in 1997, is heavily inspired by the Sierra-On-Line and LucasArts game styles and so bases the game templates around games like these. The opportunity for customization of one's game is broad, but modeled after these game styles.

The viewport dimensions for this game are 540 x 405 pixels, and all 2D assets for the sprites within the game are created in a pixel style both to simplify the creation of these visuals for myself and to match many of the aspects of the default AGS settings. This pixelated art style is also a standard within graphic adventure games such as the ones created with AGS. For the purposes of my game, this art style is expected and prevents too much distraction from the storyline. All 2D assets were drawn in Procreate, a raster graphics editor app for digital painting,

and exported into AGS. All animations, such as the cat's walking animation or the background animations in each room, are also drawn frame by frame in Procreate.

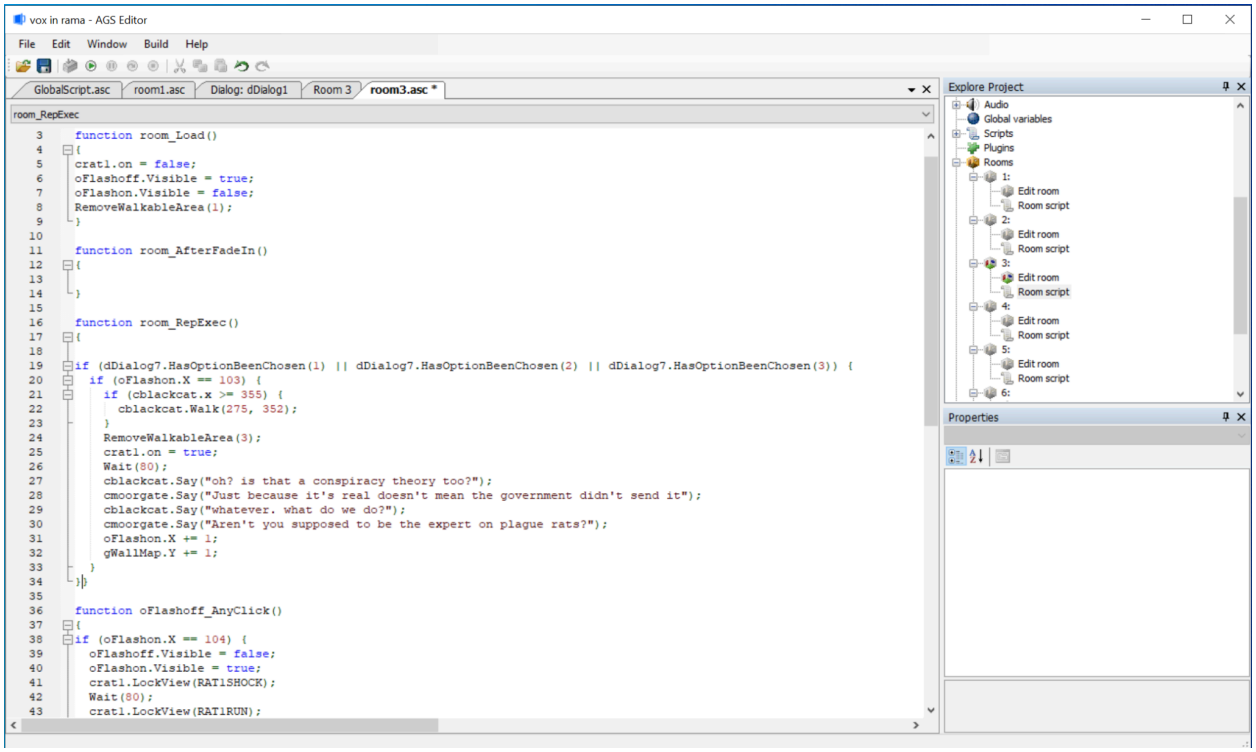


Initial sketches of my character design

Further evolution of the character design

The player character is a small, nameless black cat. This is influenced by the Witch Trials, as black cats were especially demonized and therefore prosecuted in association with witches, an association which still exists today. Black cats are said to be bad luck, a superstition so strong that “Entirely or primarily black cats will be less likely adopted—and more likely euthanized—than cats of other colors” (Carini & Sinski & Weber). The player cat is the smallest cat within the game, emphasizing the player as young, new and inexperienced, and causing the obstacles the cat must face, such as towering shadows of humans or relatively large rats, to seem larger in comparison. This cat is never referred to by name or gender, a vessel for the user, similar to the perception of how familiars work as the vessel for witches or Lucifer himself. The player character is also the only cat within the game that can move around the space, showing that only the player character has agency and the ability to affect the environment. The other cats with which the player interacts all have different personalities, communicated through their appearance, their personal environment, and their dialogue. Some of the cats are based on real cats I know or have known.

Each room within the game is a different 2D space which the player character can move through, the flat horizontal floor line allowing the player character to move in two dimensions, left and right. While they may be able to move und and down slightly, the walkable area is too narrow to realistically move in the up or down direction. This simplifies the environment and the area with which the cat must interact, prioritizing the stationary actions such as the exchange of dialogue. Within each ‘level’ of the game, or each room visited, the primary goal is to convince the other cat to join the user’s mission of fighting the rats, rather than primarily focusing on fighting the rats oneself. This also simplifies the user experience, as they only have to move left and right rather than forwards and backwards as well.

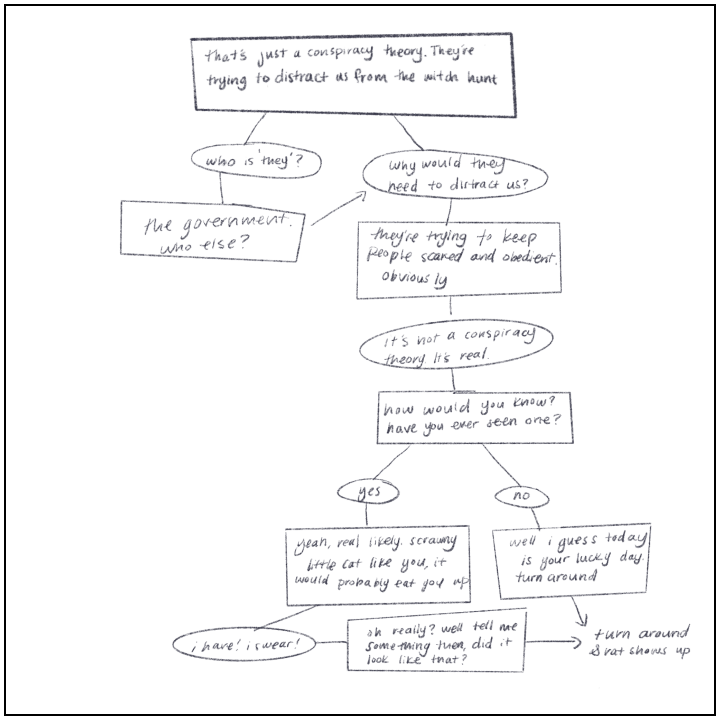


Screenshot of code within a specific room file

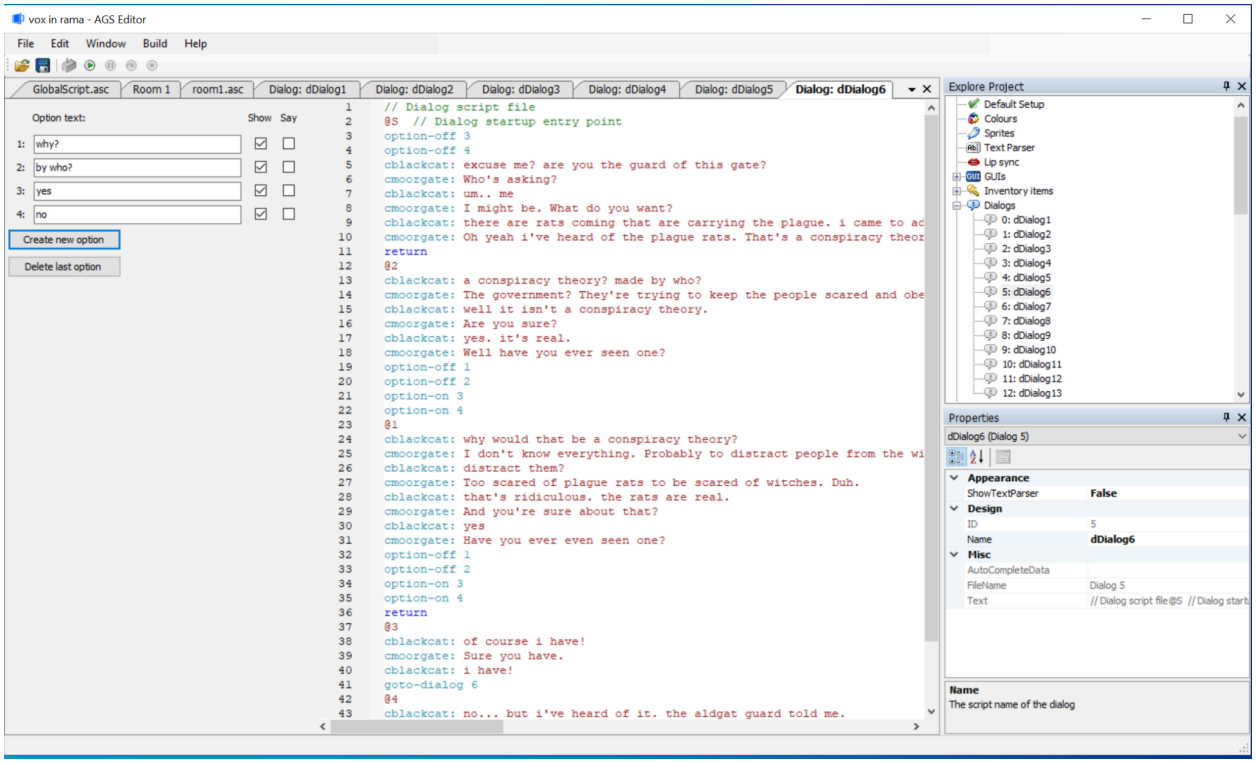
After providing some context to the user, both historical context through various fake newspapers shown in the introductory cutscene and narrative context through a conversation had offscreen by two human soldiers, the player character cat walks into the first room to be controlled by the user. Throughout this first 'level', the user is not only told what the problem is that must be solved in order to comprehend the storyline, but they are also given instructions on how to interact with the interface. When relevant to the next step that the cat must take, text boxes appear with instructions such as "click around the room to move", "click on other cats to talk to them", or "once you have finished in a room, move to the next room by walking off the left edge". These instructions are helpful for any user of the game, as interfaces and in-game expectations can change greatly from game to game, but they may be especially useful for those who have less experience playing similar point-and-click games.

Initial instructions, 'click around the room to move' given to the user via text box. In contrast, dialogue options displayed via text at the bottom of the screen

The most frequent interactive aspect of the gameplay is the dialogue the user has with other cats. This dialogue is the central aspect of the game, and most important to both communicate and progress the plotline. The user is given options for different lines of dialogue depending on which option is chosen, the program can respond accordingly. These dialogue options appear at the bottom of the screen, separating this third-person agency that the user has over the game from the rest of the environment, while the dialogue itself occurs more clearly within the confines of the room, each line appearing over the head of the character which says it. This creates a distinction between the text which allows the player to control the dialogue and the actual dialogue between the cats. As the game has no way to "fail", different dialogue options do not progress into different storylines, but rather move through similar dialogue paths, either ending up at the same conclusion or redirecting the user to choose a different dialogue path in order to move forward.



Initial outline of a dialogue section and the options the player (circular bubbles) might choose while speaking to a non-player character (rectangular bubbles)



Integration of the previous dialogue into the AGS dialogue interface

The player must also occasionally move through the game by interacting with the environment. This is done by clicking certain areas or objects within a room to interact with them, subsequently performing actions such as boarding up a hole in the wall or turning on a flashlight, or by picking up objects to use them. This game does not have an inventory function enabled, and so any object which is "picked up" will only disappear from the room to express that it has been grabbed by the user. While none of these environment interactions require skill or finesse in order to complete, at times there are some problem-solving skills involved with determining what to click depending on the problem with which the user is faced.

In order to move forward and speak to the guard at this gate, the user must help them patch up the holes in the wall by clicking the extra boards, and then clicking the large gaps that need to be covered

In order to move through this gate, the user must chase away a rat by turning on the flashlight, which shines in its face and causes it to run off

Evaluation

In order to evaluate this game, I did two short rounds of playtests. The initial playtest was a supervised playthrough of the first level of the game, done in order to get feedback on user interaction. The purpose was to see if the game was playable, while enjoyment of the game was a secondary concern. This playtest took place while the game was still in development, and so any feedback on user interaction allowed for edits to be made to the existing game files and for any further developments be made with this feedback in mind. I tested users who had differing amounts of familiarity with point-and-click games, as well as differing amounts of familiarity with my project, in order to see if moving through the first level of the game was both possible and comprehensible. After watching each tester play through this level and taking notes of places where I witnessed confusion, I verbally asked the tester three questions: if they were reasonably able to understand and use the interface, if they were reasonably able to understand the developing storyline, and how they felt about the experience. I then took notes on their answers. The silent observation allowed me to see how another user would interact with my project, witness bugs that I would not have come across, and consider places where I might facilitate the user's experience. The verbal feedback allowed the tester themself to express the parts that confused them the most, and what they thought I should alter about the game. All users expressed some form of enjoyment or intrigue upon concluding this playtest.

The second round of playtests was an unsupervised playthrough which took place after the game had been uploaded publicly to itch.io, a website created specifically for users to host, sell and download indie games. I sent testers a link to the game and a link to a survey for them to complete after they had finished playing through the entire game. All testers were able to play the game all the way through. Upon their conclusion of the game they were expected to answer four questions. The first: How long did you feel like you were playing for? Rather than have the user time themselves, I wanted to see how long they perceived the game play to be. If a game takes five minutes but feels like it takes ten minutes, That can be a helpful reference for estimated gameplay length. The second: What part was the most frustrating? Part of the playtesting mnemonic 'ffwwdd', seeing what frustrates a player is an important distinction from what they found difficult or challenging. For future edits, their frustrations are considered more heavily. The third: What part was the most fun? The second 'f' in 'ffwwdd', these are the parts that the user enjoyed the most, the things that stand out about my game and should be kept and highlighted. The fourth question: What other games have you played that you feel are comparable (and why)? While I have games that I have compared my game to and used as reference, seeing what others compare my game to helps me better understand where the game exists in the bigger context of the game world. With what other types of games does my game fit?

Going forward, there are many edits I was not able to make to the game, either due to my own skill limits, the limits of the AGS engine, or the limits of time. Through trying to build out my game on the basis of a specific, multi-level storyline, I was, in some ways, unable to develop the actual gameplay to the extent that I had wanted. Some of these aspects were mentioned during gameplay feedback, such as the desire for audio cues and music, or the interest in differing storylines and a way to 'lose' the game, things which might have improved the immersivity of the game and therefore improved engagement. This was my first attempt at making any sort of narrative game, and while it does not look exactly like my original vision, the evolution of this game was one of the most interesting parts of the process.

As this game is already published publicly on itch.io, I hope to continue to receive feedback, both prompted and unprompted, on people's experience with *Vox in Rama*. My initial hope was for *Vox in Rama* to be something for me and the people I know and love to enjoy, but I also hope for it to reach an audience outside of my known circle. As enjoyment is a central focus of my evaluation, the unprompted feedback may be a more genuine expression of this result, and will be especially valuable as the game is posted and publicized.

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