



MYST & RIVEN

The
World
of the D'ni

Mark J. P. Wolf

MYST AND RIVEN

LANDMARK VIDEO GAMES

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MYST AND *RIVEN*
THE WORLD OF THE D'NI



Mark J. P. Wolf

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INTRODUCTION



Myst (1993) and *Riven: The Sequel to Myst* (1997) are landmark video games not only within the genre of adventure games but within video game history as well. Not only was *Myst* for almost a decade the best-selling video game of all time, but it helped to introduce CD-ROM-based gaming and encouraged the sales of CD-ROM drives so that people could play it. It raised the bar for graphics, world-building, and immersive gameplay, and these aspects would be advanced even further with *Riven* four years later. *Myst* had some of the best computer-generated imagery to be found in games of its day (which were considered to be photorealistic at the time, though the meaning of the term has changed as graphics have grown more sophisticated), and location-based ambience that gradually changed as one moved from place to place. The world of *Myst* was large enough to make exploration one of the game's main goals, and was the only goal until the game's embedded narrative unfolded enough to suggest other objectives for players to attempt. The rich graphics, sound, integrated detail, sense of a three-dimensional geography, and sense of place that each location was able to invoke combined to provide an immersive gameplay experience unlike any other that players had previously encountered. The unhurried, contemplative pace, and the fact you could not be killed in the game, kept players from leaving the world for hours at a time, as they sought, bit by bit, to uncover the hidden secrets and storylines in the messages left behind and the clues in the world's details that slowly came together as the solutions to puzzles and a tale of events. Often, puzzle-solving success opened up new areas of inquiry, both narratively and geographically, as new Ages became accessible for the player to travel to. And *Riven* continued all of these trends, as well as extending the storylines begun in *Myst*, expanding to five CD-

ROMs, compared to the single one on which *Myst* was stored. *Riven*'s world and its design and puzzles were even more integrated with its storyline than *Myst*'s were, and were even more difficult, and enigmatic, as a result.

In an industry known for games centered around shooting, fighting, racing, conflict, and high-speed action, *Myst* and *Riven* stood out as something new and different, games in which contemplation was valued and mood and atmosphere were important, evoking subtler emotions than most games were capable of doing. Despite this difference, both games were highly successful and proved to be crossover games, appealing to women as well as men, and audiences of a variety of ages from children to the elderly. CD-ROMs were clearly becoming the medium for games, displacing cartridges and diskettes, and game worlds would have to grow to keep up with players' expectations. A few years later, massively multiplayer online role-playing games (MMORPGs) would begin to appear, with large, explorable worlds far more enormous than those of CD-ROM-based games. *Myst* and *Riven* had set new standards and raised expectations, and the adventure genre, and video games in general, would never be the same.

THE *MYST* PHENOMENON



The first time I encountered *Myst* was at the 1994 Digital World Expo in Los Angeles. A back room, away from the noise of the main convention halls, was lined with software booths where companies were promoting and hyping their latest products. Among them one vendor area stood out not for what it had, but for what it lacked: the lighting was minimal, almost dark, and there was no one to answer questions, not even a booth for that matter, just three white pedestals with computers on them, running the same program. The only signage was a white card that simply said “MYST” with no further explanation. Each computer displayed a different screen from the game, wherever the last participant had left off. Drawn by curiosity, conference attendees wandered into the quiet space and attempted to find out what exactly this low-profile piece of software was, an experience very much like the game itself, with no directions or obvious objective, just the free exploration of a contemplative landscape. And I (along with many others, no doubt) was hooked.

In 1993, the same year *Jurassic Park* brought photorealistic computer-generated creatures to the big screen and the World Wide Web became worldwide on computer screens, *Myst* appeared and quickly became the best-selling computer game of all time. (Of course, to call *Myst* a “game” implies a broad definition of the word, as *Myst* is perhaps better described as a single-user interactive virtual environment; there was no term to cover it at the time, and *game* was more specific than *software*.) Initially inspired in part by Jules Verne’s novel *The Mysterious Island* (1874), at least for its tone and setting, *Myst* was created by Rand and Robyn Miller’s company Cyan (now Cyan Worlds) and released by Brøderbund on September 24, 1993, for the Macintosh, with an IBM-compatible version available the fol-

lowing March. By April 1994 it had already sold 200,000 copies, a phenomenal amount considering that most CD-ROMs of the time were fortunate to sell in the tens of thousands. By January 1995 *Myst* had sold 500,000 copies, and sales would reach a million five months later. By June 2001 it had reached 5.5 million copies.¹ With continuing sales that kept it on the charts, *Myst* remained the best-selling computer game until 2002, when *The Sims* would overtake it with 6.3 million units sold.²

Nine years is an amazingly long time to remain number one in a medium that is growing so fast, both aesthetically and technologically. What accounts for *Myst*'s longevity? *Myst* was, at the time, a unique computer game experience, and its lush (for 1993) imagery gave it a different feel and more atmosphere than the typical video games of the day. Perhaps as important was *Myst*'s crossover appeal. The success of many of the best-selling games throughout video game history, including *PONG* (1972), *Pac-Man* (1980), *Super Mario Bros.* (1985), *Myst* (1993), and *The Sims* (2000), has been due in part to their widespread appeal and ability to reach people outside of the typical audience in the video game market. *Myst*, like the other four games just mentioned, was also nonviolent and easy to play, and, unlike many games of its day, it was available on a variety of platforms, including Sony PlayStation, Sega Genesis, Atari Jaguar, and both Macintosh and IBM computers. *Myst*'s system requirements allowed it to be played on a wide variety of machines; since its images were all pre-rendered, high processor speeds and graphics cards were not as crucial as they were for games that rendered their graphics in real time.

Myst's approach to graphics was another reason for its success. With all its imagery pre-rendered, *Myst* could offer beautiful graphics, allowing Robyn Miller's art background to come through in the play of light, shadow, and texture, despite the constraints imposed by 8-bit color and dithering. The rather limited use of animation and the slow, contemplative pace of the game meant that the imagery would be more closely scrutinized than it would in a game with fast action and quick-changing scenery, and *Myst*'s images held up to that scrutiny. Four years later *Riven: The Sequel to Myst* would raise the standard even more, and later versions of *Myst*, *Myst Masterpiece Edition* and *realMYST*, featured graphical improvements that made the original *Myst* graphics seem crude and static by comparison, making it hard to remember just how groundbreaking *Myst*'s look was in 1993.

Not only did *Myst* have good graphics, it had more than 2,500 screens' worth of imagery, which helped make up for their stasis. This profu-

sion became possible through the use of CD-ROM technology, and *Myst* became the first big hit to appear in the medium. For some people it was one of the main reasons to buy a computer with a CD-ROM drive. *Myst* was well suited to CD-ROM technology, due to the fact that the running of its program did not require continuous accessing of the CD-ROM, which is still, even today, a relatively slow process requiring pauses for loading to be worked into the gaming experience. *Riven*, with over 4,000 screens of pre-rendered graphics and video sequences on five compact discs, also worked the disc changes into gameplay by dividing its terrain into islands that could reside separately on different discs.

And finally, *Myst*'s longevity was also due in part to a price-reduction scheme that kept broadening its market and kept its sales on the charts. In its first year or so of release, *Myst* cost around \$64, a price it would continue to command while initial sales were strong (see the figures mentioned above). In 1996 the price was reduced to \$50, and in November of that year it was slashed even further to \$25, an act that, coupled with interest in *Riven*'s impending release, renewed interest in the game and led to a surge in sales.³ *Riven* and *Myst III: Exile* followed a similar pricing scheme, and by early 2004 one could buy the *Myst 10th Anniversary DVD Edition*, containing full versions of *Myst Masterpiece Edition*, *Riven*, and *Myst III: Exile*, for under \$20. On Amazon.com new, unopened copies of the original *Myst* were selling for as low as \$2.55, and on eBay, used copies were selling for a penny each.⁴

The success of *Myst* spawned not only revised versions and sequels, but an array of other merchandise as well: soundtracks for *Myst*, *Riven*, *Myst III: Exile*, and *Uru: Ages Beyond Myst*; three novels based on the *Myst* storyline; *From Myst to Riven*, a coffee table book on the making of the games; the Prima and Bradygames "Strategy Guides" for the games (something of a misnomer, seeing as none of the games involves strategy); shirts available directly from Cyan; and even *Myst: The Puzzling New Board Game Adventure*, which curiously is not mentioned on the "Goods" page of Cyan's website. *Myst* also spawned its share of imitators, none of which was able to match *Myst*'s success. Most importantly, though, was *Myst*'s raising of the bar concerning graphics, sound, ambience, and overall experience in the adventure game. *Myst* showed that puzzle-based games that favored contemplation over action were not only possible but could even be profitable, if the design was good and attention was paid to detail.

While I will be referring to *Myst* as a game, some may question its status

as such, but with its single-player environment in which the player explores, solves puzzles, and uses various objects and tools to achieve certain sub-goals, *Myst*'s main objective places the game squarely into the already-existing genre of adventure games (which fits it best, although *Myst* can also be considered a puzzle game). To fully appreciate *Myst*'s accomplishments, however, we should first consider its place in the history of the genre.

MYST AND THE
ADVENTURE GAME GENRE



Before we look at the adventure genre and *Myst*'s place in it, we might try to define what the genre is and what makes it unique. In my book *The Medium of the Video Game*, I described the adventure genre as follows:

Games which are set in a “world” usually made up of multiple connected rooms, locations, or screens, involving an objective which is more complex than simply catching, shooting, capturing, or escaping, although completion of the objective may involve several or all of these. Objectives usually must be completed in several steps, for example, finding keys and unlocking doors to other areas to retrieve objects needed elsewhere in the game. Characters are usually able to carry objects, such as weapons, keys, tools, and so on. Settings often evoke a particular historical time period and place, such as the Middle Ages or Arthurian England, or are thematically related to content-based genres such as science fiction, fantasy, or espionage. This term should not be used for games in which screens are only encountered in one-way linear fashion, like the “levels” in *Donkey Kong*, or for games like *Pitfall!* which are essentially limited to running, jumping, and avoiding dangers (see Obstacle Course). Nor should the term be used to refer to games like *Dragon's Lair*, *Gadget*, or *Star Trek: Borg*, which do not allow a player to wander and explore its “world” freely, but strictly limit outcomes and possible narrative paths to a series of video sequences and linear progression through a predetermined narrative (see Interactive Movies).¹

Attempting to define the genre in such a way as to distinguish it from other genres, it seemed to me that the game's world and the player's use

and experience of it are at the core of the adventure game. Many adventure games, while they have monsters and other characters opposed to the player's character, do not have an antagonist in the classic sense. The game's "world" itself takes on that role, as players attempt to learn its geography and the navigation of it, to gain access to its hidden, closed, and locked areas, and learn to use the various objects and devices within it. Exploration, navigation, areas to which access is initially withheld, and tool usage are found in many other genres, but in the adventure genre they occupy a central position, and are often the subgoals necessary to the achievement of the main objective. The discovery of how such subgoals contribute to the overall objective is itself also a part of the experience and essence of the adventure game.

The evolution of the adventure genre, then, relied on the development of navigable space (space is so crucial to the genre that solutions of adventure games are often referred to as "walkthroughs"). In the mid-1970s, Willie Crowther, a computer programmer, combined his interest in cave exploration and mapping, the role-playing game *Dungeons & Dragons* (1974), and his background in programming to produce what would come to be known as the first computer game in the adventure genre, *Colossal Cave Adventure* (sometimes shortened to just *Adventure*).² The all-text game consisted of descriptions of a series of connected rooms through which a player moved by typing responses such as "n" for "north" or "d" for "down" (besides the four cardinal directions, there was some movement on the vertical axis). Several objects, like keys or a lamp, were also needed by the player during the game. The game's geography was based on Bedquilt Cave in Kentucky, and mentions many of its features. Crowther's description of the cave and its layout was accurate enough that one first-time visitor to the cave was able to find her way around based solely on her knowledge of the game.³ In 1976, programmer Don Woods found Crowther's program and, with his blessing, expanded the program, adding fantasy touches influenced by the writings of J. R. R. Tolkien. From there the program was ported onto various computer systems, and spread to universities and across computer networks.

Crowther and Woods's *Adventure* was the first in a long line of text adventure computer games, sometimes referred to as branch of Interactive Fiction, whose roots go back into literature. Text adventures are still being produced today, though no longer commercially.⁴ The innovations introduced by text adventures, particularly the concepts of rooms joined

together into a navigable space, characters with which one could have brief conversations or interactions, and objects (like keys) that gave players access to new areas, would soon revolutionize the related field of video games. Video games before 1977 consisted of single screens of graphics in which the action of the game took place. The arcade game *Super Bug* (1977) by Kee Games (a subsidiary of Atari) was the first game to feature a scrolling screen (an innovation that Atari patented), which revealed off-screen space as it scrolled, but the space was still a single area, albeit one larger than the screen.

The following year, 1978, Warren Robinett was developing the first graphical adventure game for the Atari 2600, which would also be called *Adventure*. After playing Crowther and Woods's *Adventure* at Stanford, Robinett decided that it could work as a video game, and took on the challenge of translating such a game into a 4,096-byte Atari cartridge, a task that Robinett's boss at Atari thought was impossible. Problems that had to be solved included how to represent rooms and their connectedness, usable objects that could be carried around, picked up, and dropped, and autonomous creatures that could be encountered during gameplay.⁵

Released in 1979, *Adventure* featured 30 interconnected screens that used the cinematic convention of cutting from one screen to the next rather than scrolling, making it the first video game to use multiple screens. The game also had "disjoint regions" that the player could only access with the use of certain tools (the keys to open castle gates, and the bridge to pass into walled areas), and even off-screen actions the effects of which the player could encounter later (for example, the bat could pick up and drop objects while the player was elsewhere). The game was far more sophisticated and detailed than any of the other home video games available at the time, and a commercial success as well, selling over a million copies at \$25 each.⁶

Robinett's *Adventure*, while not a literal translation of Crowther and Woods's program, did successfully bring the format of the text adventure game to graphical video games. Robinett's work was followed by other graphical adventure games for the Atari 2600, many of which brought further innovations to the idea of a graphical navigable space. *Superman* (1979) featured a subway that was entered from doorways located near the center of the screen rather than at its edge, like *Adventure*'s castle gates, and the subway screens, when exited, could not be reached by going back the way you came, resulting in one-way connections between screens. *Haunted House* (1981) had staircases (in top view) that connected identical-looking

floors that differed in color, so that the player-character did not disappear and reappear elsewhere, but stayed visible in place while the screen changed behind it. *Raiders of the Lost Ark* (1981) mixed top-view screens with side-view screens of its mesas depending on the action occurring, and also had an inventory strip at the bottom of the screen, and 13 different objects that could be picked up and used. *Venture* (1982) showed its scenery at two different scales, depending on where the player was; the four rooms of the game appeared together on one screen while the player was outside them, but each room was shown on a full screen, with its interior visible, as soon as the player entered. *E.T.: The Extraterrestrial* (1982), *Krull* (1983), *Dark Chambers* (1988), and the *Swordquest* series of games also featured variations on the way their spaces were depicted and connected, although all of them relied on cutting from screen to screen, or two-way scrolling.

Not only was Kee Games's *Super Bug* (1977) the first video game to feature scrolling, its screen could scroll in both horizontal and vertical directions, resulting in a very large playing field of which only a portion was seen at once; and in 1980, Richard Garriott's computer game *Ultima* was the first home computer game to feature four-way scrolling. *Ultima*'s four-way scrolling screen technique, using tiled graphics that were added or removed from the edges of the screen as it scrolled, was developed by Garriott with his friend Ken Arnold, who was one of the programmers that developed the computer game *Rogue* the same year (*Rogue* was another adventure game with a graphical display made of ASCII characters; for example, the player's character was represented by an "@" that could be moved around the screen).

From the late 1970s and throughout the 1980s, adventure games generally fell into two camps; graphical adventure games and text adventure games. The first, represented mainly by home video games, relied mainly on graphics that had an on-screen character the player could control, and spaces that were navigated graphically. The graphics were simple, and often mixed perspectives, showing the playing field itself in top view, while the characters and objects were shown in side view (the practice of mixed perspectives existed long before video games, and appeared in a variety of places including maps, medieval drawings, and chess diagrams). What the games lacked in visual richness and narrative depth they attempted to make up for in direct, on-screen action that was more immediate than verbal descriptions and typed responses.

The other type of adventure game, the text adventure or Interactive Fic-

tion, relied on words for description and interaction, which enabled it to have much larger worlds with hundreds of room and character responses, although the player's interaction with the world was more indirect, even if it was more in-depth conceptually. From 1980 onward, beginning with Roberta Williams's *Mystery House*, these games began to include graphics which acted as illustrations for the game's text. Although very low resolution by today's standards, these illustrations were much more detailed than the typical graphical adventure games of the time, but they were for the most part little more than slides that players could not directly interact with. These images did introduce a first-person perspective into the games, which helped to engage the player more and compensate for the lack of a graphical user interface.

The bifurcation of the adventure genre was due to the technologies of home video game systems versus home computers during the late 1970s and 1980s. Home computers had more memory, which allowed for more detailed graphics and a larger world, while home video game systems had smoother movement and were capable of fast action. Perhaps the best illustration of the differences is a comparison of two of the most popular machines of the time, the Atari 2600 and the Apple II home computer. According to Warren Robinett,

The Atari 2600 had very limited graphics (only 2 "high resolution" sprites) and was hard pressed to support the graphics for a game-world background plus movable objects which are needed for an adventure game. It could barely do any alphanumeric text, and then only huge fat letters with no more than 12 chars [characters] to the line of text. After my *Adventure* cart[ridge], there were some adventure games done, but the hardware was not friendly to this style of game.

The Apple II computer was a contemporary to the Atari 2600—it became popular in the late 1970's. But because it was a computer, not a video game, things were different. It had a keyboard you could type on. It had a memory mapped screen that could support arbitrarily complex graphics (within its 6 color, 140 (192 resolution), although it might take a long time to change these graphics. (The 2600, by comparison, was set up for smooth animation, but had very limited graphics complexity.) The Apple II had quite a bit more memory—typically 48K bytes of RAM, as opposed to 4Kbytes of ROM and 1/8Kbytes (128 bytes) of RAM for the 2600. . . . I'd say the Apple II was a much friendlier hardware environment for doing a static graphics + text style of adventure game

than the Atari 2600. (Well, you just could not do this kind of game on the 2600—no way to type, could not support picture-type graphics.)

The 2600 had no non-volatile memory, so there was no way to “save” your state in an adventure game. This by itself might have driven the migration [of adventure games to home computers]. Having to start over every time essentially made a multi-day adventure game impractical. The home computers had floppy disks that could be written to save state. . . . The next generation of video game consoles after the Atari 2600 (Nintendo SNES, Sega Genesis) had much better graphics capabilities and could do adventure games just fine. They were 2D tile-based graphics for the background, with quite a few sprites for animated objects in the foreground. . . . The IBM PC was introduced in the early 1980’s, but its capabilities were essentially the same as the Apple II, although of course memory capacity increased with the passing years.

Here are the main things home computers (eg Apple II) could do that the Atari 2600 could not: 1. display full-screen images, 2. display lines of text at small enough font size to be usable, 3. allow the user to type text (via ASCII keyboard), 4. allow game state to be saved in non-volatile memory.

Some but not all of these limitations carried on to the 2nd generation of consoles.⁷

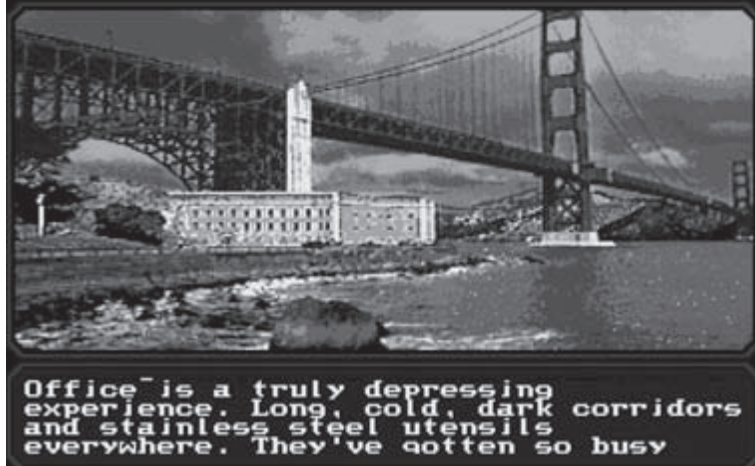
Advances in graphics display standards also made better-quality graphics possible. Prior to 1984, the CGA (Color Graphics Adaptor) standard, which allowed image resolutions of 320 by 200 pixels with a four-color palette (or 620 by 200 with a two-color palette), was used by DOS computers for graphic displays. Such harsh graphical restrictions made representational imagery difficult, and it was not until the 1984 release of the EGA (Enhanced Graphics Adaptor) standard, which allowed image resolutions of 640 by 350 with 16 supported colors from a 64-color palette, that images began to dominate the screen in what were still mainly text-based adventure games. In 1987 graphics improved again when the VGA (Video Graphics Array) standard appeared with images of 640 by 480 pixels and a 256-color palette. (Later, SVGA [Super VGA] would increase image resolution to 800 by 600 pixels.) Figure 1 shows examples of three different graphics standards: the top screen, from *Déjà Vu 1: A Nightmare Comes True* (1985), is CGA; the center screen, from *King’s Quest III: To Heir is Human* (1986), is EGA; and the bottom screen, from *Mean Streets* (1989), is VGA.



office.
You're in an office. There is a dead body slumped over the desk. His left hand still grips the phone receiver.
Score:15 of 210 0:18:42 Sound:on



1_



Office is a truly depressing experience. Long, cold, dark corridors and stainless steel utensils everywhere. They've gotten so busy

Fig. 1. Examples of different graphics standards: CGA (top), EGA (center), and VGA (bottom)

During the 1980s, and especially after the appearance of the graphical user interface, home computer adventure games began to add features originally found in video games, making them less like the early all-text adventures. Roberta Williams's *King's Quest* (1984) introduced the idea of the animated walking character that walked over the background graphics, and *King's Quest III: To Heir is Human* (1986) had a clock on the titlebar (see the second screenshot in fig. 1), with events occurring at specific times, adding an element of time pressure to the game. ICOM Simulations's *Déjà Vu 1: A Nightmare Comes True* (1985) had an inventory box (see the first screenshot in fig. 1), similar to video games like *Raiders of the Lost Ark* (1981) for the Atari 2600. It was also one of the earliest home computer games to use a mouse and cursor, giving it point-and-click capability similar to home video games using joysticks with firing buttons, although it used point-and-clicking mainly for the selecting of objects from an inventory window or choices from a menu, rather than avatar control or spatial navigation. Despite these advances, however, the images used in many of these games were still more or less illustrations of what was essentially still text-based interaction.

A more user-friendly and graphically oriented interface came in 1987 with the introduction of the SCUMM (Script Creation Utility for *Maniac Mansion*) engine written by Ron Gilbert and Aric Wilmunder of Lucasfilm Games (now LucasArts). Used (and named) for the game *Maniac Mansion* (1987), the engine was described in detail in the game's manual:

The large top portion, The Animation Window, is the largest part of the screen where the animated world of the mansion is displayed. It shows the "camera's eye view" of the room that the currently active character is in. The Sentence Line is directly below the Animation Window. You use this line to construct sentences that tell the characters what to do. A sentence consists of a verb (action word) and two nouns (objects). An example of a sentence that you might construct on the Sentence Line is "Unlock door with key." Connecting words like "with" will be put in automatically by the program. Verbs must be selected from the group of words in the columns below the Sentence Line. You will always be able to see all the words used in the game. To select a verb, position the cursor over the word and click. The Inventory is the area below or to the right of the Verbs. Each character has his or her own Inventory. It is empty at the beginning of the game; the name of an object is added to a char-

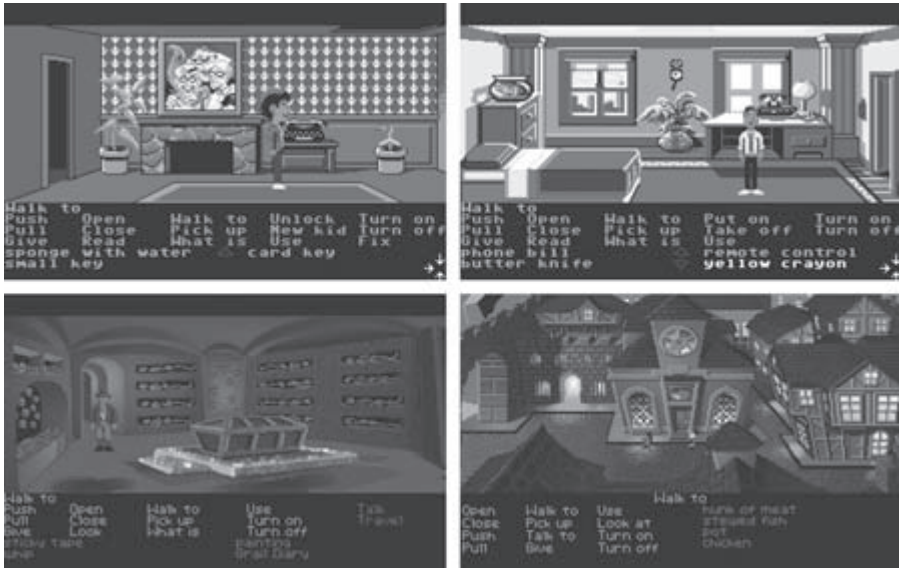


Fig. 2. LucasFilm games using the SCUMM engine, *Maniac Mansion* (1987) (top left), *Zak McKracken and the Alien Mindbenders* (1988) (top right), *Indiana Jones and the Last Crusade* (1989) (bottom left), and *The Secret of Monkey Island* (1990) (bottom right)

acter’s Inventory when the character picks the object up during game play. There is no limit to the number of objects a character can carry. You may need to scroll up or down to see all items in your inventory. Nouns (objects) can be selected in two ways. You may select a noun by placing the cursor over an object in the Animation Window and clicking. Most objects in the environment, and all objects that are usable in the game, have names. If an object has a name, it will appear on the Sentence Line when you click on it. You may also select nouns by clicking on words in the Inventory. To move a character around, select “Walk to” from the Verbs by positioning your cursor over it and clicking. Then move your cursor into the Animation Window, point it where you want the character to go, and click. If you point to an open door and click, the character will walk through it. Notice that “Walk to” appears automatically on the Sentence Line after a sentence has been executed—this is because moving around is what your characters will be doing most often. “Cut-scenes” are short, animated sequences—like scenes from a

movie—which can provide clues and informations about the characters. When you are viewing a cut-scene, you do not direct the action so the text below the Animation Window disappears.⁸

LucasFilm Games would go on to use the SCUMM engine (and updated versions of it) for their games into the 1990s (see fig. 2). Although characters could be directed by clicking in the “Animation Window,” the interface did not allow direct avatar control, as was found in even the earliest home video games, but it did provide, along with cut-scenes, on-screen action that the earlier graphically illustrated games lacked. After the release of the Nintendo Entertainment System (NES) in 1985, home video game systems had improved to the point where home computer games could be ported to them, resulting in the cross-platform release of many home computer adventure titles. Likewise, more adventure titles were originating in home console systems, such as the *Legend of Zelda* series, which first appeared on the NES in 1986.

As the 1990s began, many cross-platform games were available, and after the appearance of VGA, a number of early games were rereleased with updated graphics (see fig. 3), especially those that were a part of ongoing series (1990 and 1991, for example, saw the rerelease of *King’s Quest I* along with *King’s Quest V*, *Space Quest I* along with *Space Quest IV*, and *Leisure Suit Larry I* along with *Leisure Suit Larry V*).

After 1987, an increasing number of games began to be released on CD-ROM, for both home computers and home console games like the NEC Turbogرافx CD expansion for the Turbogرافx-16 console system, and later CD-ROM game systems from Sega, Sony, and Nintendo. Adventure games, because they featured navigable environments, typically needed more memory than single-screen or scrolling-screen games, and the CD-ROM, at roughly 650 megabytes, encouraged the use of better graphics, better sound, and even integrated video clips.⁹ Advances in computer animation meant more photorealistic graphics, and full-motion video (FMV) began appearing in games, beginning with Trilobyte’s spring 1993 release, *The 7th Guest*, which was over a gigabyte in size (because of its video clips), and the first CD-ROM game to require two discs.

Such was the state of the adventure game genre in the late 1980s and early 1990s, when Rand and Robyn Miller’s company Cyan began developing games, culminating in the release of *Myst* in September 1993. Perhaps *Myst*’s



Fig. 3. Two incarnations of The Quiki-Mart from the original 1987 version (*top*) and 1991 update (*bottom*) of *Leisure Suit Larry 1: Leisure Suit Larry in the Land of the Lounge Lizards*

greatest competition at the time, and the game that held the title of best-selling PC game before *Myst* surpassed it, was *The 7th Guest*. Released only a few months apart, there were a number of parallels between the two games; both had sold over 100,000 copies by the end of 1993; both were widely praised for their high-quality and (at that time) photorealistic computer-generated graphics; both spawned sequels whose subtitles alluded to the original (*The 11th Hour: The Sequel to The 7th Guest* [released August 1995] and *Riven: The Sequel to Myst* [released October 1997]); both were given larger backstories in novelizations appearing in 1995 (*The 7th Guest*, by

Matthew J. Costello and Craig Shaw Gardner, and *Myst: The Book of Atrus* by Rand and Robyn Miller with David Wingrove); and both were noted for being the reason many consumers bought CD-ROM drives.¹⁰

Over time, however, *Myst* proved it had staying power and became a classic, while *The 7th Guest* lapsed into relative obscurity. Writing in 2003, ten years after *Myst*'s appearance (and without realizing that *Myst* was released for the Macintosh earlier than 1994), Adventuregamers.com reviewer Heidi Fournier concisely summed up the differences between the games:

The 7th Guest is as famous and significant a game as *Myst*—well, almost. Released a year before [the IBM-compatible version of] *Myst* in 1993, it had the same kind of luminous graphics wound around a familiar point & click format. It tantalized users with a siren song of perspicuous graphics and open exploration. Gamers flocked to game stores clamoring for it. However, that is where the similarities between the two games end. Now some years later, *Myst* has proved a durable survivor of the adventure game exodus, still holding a great deal of its original appeal, while *The 7th Guest* has slowly faded into obscurity.

It's not just the passage of time, technology, or even the rise of first-person shooters that has caused *The 7th Guest*'s appeal to slowly evaporate. Sadly, it was the inherent dullness of its largely inconsequential challenges. Where *Myst* immerses players in a number of detailed game worlds, *The 7th Guest* localizes the action to the rooms of a haunted mansion. Where *Myst* weaves the game's puzzles into the environment, *The 7th Guest*'s are strictly stand-alone. Where *Myst* can be played in any number of ways successfully, *The 7th Guest* is very linear, requiring certain mysteries to be solved before others. And where *Myst* offers puzzles that steadily increase in difficulty, those in *The 7th Guest* are mostly common and simple.¹¹

Another factor in *Myst*'s popularity was its subject matter. *The 7th Guest*, as a gothic horror tale, had less crossover potential than *Myst*, which was not as strongly identified with a single genre. Although heavy with mood and atmosphere, *Myst*'s environment was (for the most part) a welcoming one inviting contemplation, rather than the dark and dreary haunted mansion of *The 7th Guest*. *Myst* Island was a place to which players wanted to go. One group of fans desired to go to there so much that they created the "Myst Island Recreation Initiative," which "will endeavour to execute the building of an island like the island of *Myst* in every possible way."¹²

Myst brought with it new twists on familiar ideas, and can be seen as both innovating and developing existing traditions and conventions of the adventure genre, especially in regard to creating an integrated and seamless experience for the player. Like *Maniac Mansion*, you can't die in *Myst*, keeping players from being ejected from the game before they want to leave. Graphically, *Myst* is designed to keep players as much within the diegesis (the world in which the story takes place) as possible. This is in keeping with the development of the adventure genre; whereas many early games featured nondiegetic (outside of the story world) informational graphics, such as explanatory text, titlebars with score counters and clocks, inventory boxes or lists, and lists of response choices, later games had an increasing amount of emphasis placed on the image, which directly linked the player into the diegesis. At first, images were used to illustrate text-based adventures, and then, after the rise of point-and-click graphic interfaces, more of the player's activity took place via the cursor in the image as opposed to typed commands. *Myst* would eliminate almost all nondiegetic informational graphics, containing all its player interaction within the image, with objects held by the hand-shaped cursor (like the pages or the match) and only one object held at a time, so that no inventory box was needed (although *Riven* and *Myst III: Exile* would represent books a player was holding as icons below the screen). The few informational graphics *Myst* did have were integrated directly into the diegesis itself, for example, the map on the wall in the library, the backstory text in the books found on the bookshelf, the note lying on the grass, and so on. *Myst* also had to overcome the sometimes slow loading times of early CD-ROM drives, and did so by reducing its images to around 57 kilobytes each and reducing its sounds to 8 bits, 11 kHz. The separation into various Ages also gave the game natural breaks. A transitional sound effect and cinematic fade-out and fade-in helped to retain the continuity of the experience that could have been ruined by the "Loading . . ." screens sometimes found in other games. (By the time of *realMYST* [2000] and *Uru: Ages Beyond Myst* [2003], loading would again take awhile, and bars showing the progress of the load would briefly [and occasionally not-so-briefly] appear on the bottom of the screen.)

Exploration and navigation play an important role in *Myst*, as they do in many games in the adventure genre. In most games before *Myst*, however, the areas of the game were seen one at a time, with entrances and exits indicated on the screen, and only by moving screen to screen could

a sense of the game's geography and layout be obtained. Examples of this would include moving from chamber to chamber in a cave system, or room to room in a house, or simply from one game location to another, with a minimal sense of the spatial connection between locations. Occasionally there might be a locked room or blocked passageway that could be opened and explored later, once a key was found, or monster guardian defeated, or some other condition fulfilled that granted access. *Myst's* approach to geography was quite different. As *Myst Island* and each of the game's Ages were computer-generated models, the resulting game images could be staged in depth; one could see locations in the distance that might be several moves away, and the same objects and locations could be viewed from different angles and directions. Likewise, the background ambience also changed gradually from one location to another; near the shore, the sound of the waves lapping was louder, but as the player moved up the hill the sound of the waves grew fainter while the sound of the wind grew stronger. The result was an experience of deep, integrated three-dimensional space that was less segmented and isolated, inviting the player inward into the world and pulling the player's curiosity in multiple directions simultaneously.

Nor were *Myst's* puzzles stand-alone and isolated, as they were in most games of the day; instead, they were set into the game's geography and intermixed in such a way that it would not be clear at first which clues went with which puzzles (and one could encounter and solve them in any order), and the sorting and connecting of these clues added another layer of enigmas. An understanding of the game's geography was also crucial, not just for navigation as it was in most other games, but for the solving of the puzzles themselves. A grasp of the layout of the islands was needed to comprehend the puzzles involving alignment, visually (as in *Myst Island's* map and rotating tower) or aurally (as in the Selenitic Age's dish antennas, which had to be aligned to the transmitters of various sounds around the island). These ideas would appear in the later games of the series as well, for example, *Riven's* map room on Survey Island or the rotating pentagonal room on Temple Island; or, in *Myst III: Exile* (2001), the rotating reflectors that reflect a beam of light around the island, and the rotating plant that picks up sounds depending on where it is aimed, or the cameras that must be aligned with the symbols found on other parts of the island (all of which are in J'nanim, the first Age players encounter after leaving Atrus's study).

Myst's puzzles also used geography in another way. Often the machinery used to power other machines or to gain access to new places was spread out

over different locations, rather than being localized in a single place, making the connection of cause and effect, or even an understanding of what the player needed to do, more difficult to figure out. Power lines, pipes, gear systems, and so forth stretched consequences of actions out across the landscape, requiring the player to move about the island to see where they led. (Some connections, like those between the sunken ship in the harbor and the sunken ship model in the fountain, or the large gears and the small gears in the clock tower, did not have visible physical connectors like wires or pipes, but rather symbolic connectors that relied on visual resemblance.) These ideas as well would be further elaborated on in later games, especially *Riven*, where physical connections and symbolic connections would extend between islands as well as across them.

While *Myst's* innovations set new standards for the adventure genre, they were not simply the result of an overnight success. Many of the concepts, ideas, and innovations found in *Myst* can be seen developing in the three earlier works of Rand and Robyn Miller, and it is to these that we now turn.

EARLY WORKS OF THE MILLER BROTHERS



In 1987, brothers Rand and Robyn Miller formed the company Cyan (which was briefly known as “Prolog,” the name of Rand Miller’s consulting company)¹ and began working on their first program, *The Manhole* (1987), one of the first entertainment products to appear on CD-ROM. *The Manhole* was a software program for children, made in black and white for the Macintosh, with a point-and-click graphical user interface, which involved exploration and navigation through a fanciful underground world inhabited by talking animal characters that the player encountered along the way. Cyan’s next two programs were also for children, *Cosmic Osmo and the Worlds Beyond the Mackerel* (1989), which featured the exploration of seven interconnected small worlds, and *Spelunx and the Caves of Mr. Seudo* (1991), whose underground cave system contained a number of educationally oriented games, in which the player could learn about such things as Cartesian coordinates, the growth of trees, and also, according to D’ni historian and longtime Cyan employee Richard A. Watson’s (RAWA) website, “study metabolism by changing the environment of a pet lizard, learn properties of light and sound with the lightning simulator, experiment with gravity by dropping pebbles in the Yon-Yon Caverns, watch the Criss-Ants as they search for food and take it back home, and many other activities. The cave system is also modular, so it is possible that if new rooms are discovered in the future, they can be added to your cave.”²²

The games were all released on the new medium of the CD-ROM, although other versions were available; *Cosmic Osmo*, for example, was released on six 3½-inch floppy diskettes through Activision. *The Manhole*

and *Cosmic Osmo* were both relatively small programs, much less than the roughly 650 megabytes available on the CD-ROM, and both games used the remaining space on the CD-ROM for songs used as the soundtrack for the games, giving them a soundtrack superior to the rather thin electronic music found in many other games of the era.³ Like other computer-based adventure games of the time, the original black-and-white games were revised and rereleased; a redone version of *The Manhole* with color and higher-resolution graphics appeared as *The Manhole Masterpiece Edition* in 1994, and a colorized version of *Spelunx* appeared in 1993. A “Version 1.2” of *Cosmic Osmo* was released, and a colorized version was started but never completed.⁴ *Myst* itself would undergo revision and rerelease, appearing with enhanced graphics and sound and a “DigitalGuide” hints feature as *Myst Masterpiece Edition* in 1999, and as the real-time three-dimensional version, *realMYST*, in 2000, for which new models of everything were generated using the original *Myst* models for reference.

The underground worlds of *The Manhole* and *Spelunx*, as well as the underground areas found in the *Myst* series, hark back to the original underground adventure of Will Crowther’s caving program, recalling the roots of the adventure genre. The idea of an underground world would eventually result in the subterranean civilization of the D’ni, whose caverns are the centerpiece of the *Myst* series’ world. *The Manhole* also traces its roots to Lewis Carroll’s *Alice in Wonderland*, and both the book and the White Rabbit make an appearance in the game, and even the name “Manhole” alludes to the rabbit hole into which Alice falls. On a bookshelf (every game designed by the Miller brothers has a bookshelf in it somewhere) in *The Manhole* there are other children’s classics whose influence on the game’s design is apparent: A. A. Milne’s *Winnie the Pooh*, Kenneth Grahame’s *The Wind in the Willows*, and C. S. Lewis’s *The Lion, the Witch, and the Wardrobe*. Each book, when opened and clicked on by the player, also becomes a portal of entry into the world of *The Manhole*, prefiguring the D’ni linking books long before the appearance of *Myst* (another early version of a linking book appears in *Cosmic Osmo*).

Like *Myst*, all three of the early games used a point-and-click interface, with all the necessary informational graphics worked into the diegesis of the game itself. Even the little hand-shaped cursor (which replaces the computer’s arrow cursor) is included in some of the animations in *Cosmic Osmo*. In one, the cursor gets eaten by the pumpkin-head after the player clicks on it, and in another, the hand flies around in pain and plunges into

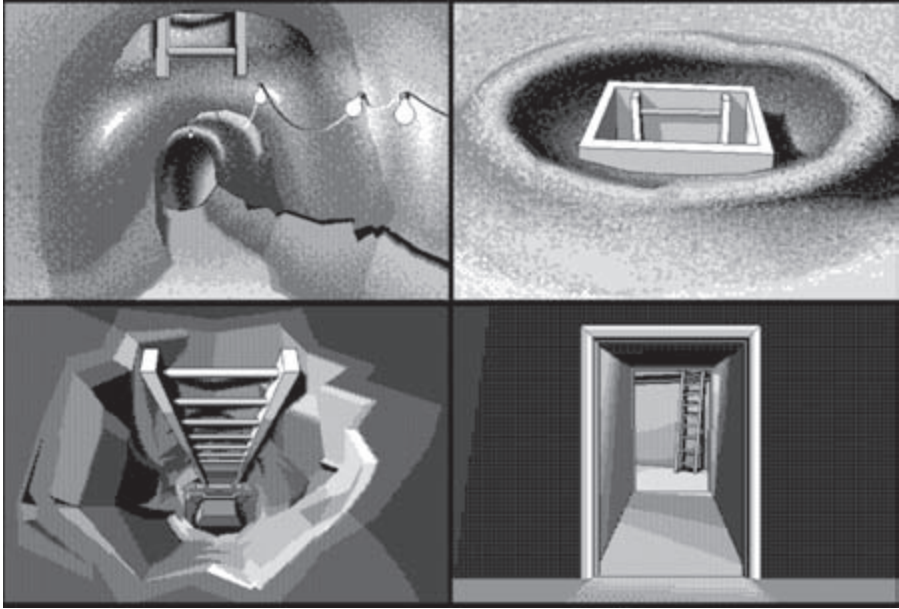


Fig. 4. Examples of ladders in *Cosmic Osmo* that beckon players and attempt to draw them deeper into the game's world

water after the player clicks on a hot surface, which the player is likely to do since a nearby sign warns the player not to touch it.

There are many other stylistic similarities between the three early games and *Myst*. Common elements among all the games include ladders and stairways (the ends of which extend invitingly out of holes, shafts, and doorways; see fig. 4); messages on sheets of paper left in mailboxes, drawers or other places; lights that the player turns on and off; views looking out of windshields from inside vehicles as they travel; elevators (usually with a window to give some sense of movement, similar to the windshields); underground rock-walled mine tunnels hung with lightbulbs (occasionally including mine cars on tracks); and in both *The Manhole* and *Myst*, an old, wooden sunken ship (which is not used for travel, but rather as an environment just like a building), as well as little vehicles that can travel between a small number of fixed destinations. Exploration and navigation are central to all the Miller brothers' games, and they are the only real objectives in the three early games. The additional objectives found in *Myst*, *Riven*, and later

games in the *Myst* series act as motivation for the player's discoveries, placing an even greater importance on exploration and navigation.

Experimentation is often linked with exploration (and is, in a sense, an extension of it into the realm of the known versus unknown), and laboratories and rooms of simple machinery also populate the worlds of the Miller brothers' games. Media technology figures prominently: books, phones, video screens (or the moving images found within linking books), imagers, and radar-like screens that track a vehicle's progress. *Cosmic Osmo* even self-reflexively includes two video games, *Ship Chip Lander* and *RubberGut*, and even a Macintosh computer displaying *Cosmic Osmo* itself (see fig. 5). While playing either of the two games after depositing a quarter (several of which are conveniently located on the game cabinets), players are reminded how far the video game has come from the one-screen games of simple action, and how advanced *Cosmic Osmo* is by comparison. Oddly enough, however, when one clicks on the Macintosh with *Cosmic Osmo* displayed on-screen, one does not get to play it (it would have been a nice example of recursion if the player's clicking on the computer would have returned the player to the title screen and restarted the game, only to jump back out later when the player tries to quit).

Optical technologies are another theme in the content of the Miller brothers' worlds. Telescopes appear in *Cosmic Osmo*, *Spelunx*, *Myst*, *Riven*, and *Myst III: Exile*, each for a different purpose (*Myst* has telescopes in both the Stoneship Age and Mechanical Age); *Cosmic Osmo* has a microscope with a number of different slides at which the player can look; *Myst* and *Riven* both have imaging devices, and *Riven* in particular connects locations with cameras and viewscreens, sometimes tantalizingly. *Riven* also has its phenakistiscope-like viewers through which the player can view and align the symbols on the rotating domes, and *Myst III: Exile* has other technologies including reflectors used to bounce a beam of light across the island, viewscreens, and more. The idea of mediated imagery is present not only within the games' diegeses, but in the games' images themselves; for example, lens flares are present in images in both *The Manhole Masterpiece Edition* and *Myst*. Lens flares are an element of photorealism, not realism; such images attempt to imitate mediated images rather than direct experience. Because the worlds of the *Myst* series are all themselves entirely constructed from mediated imagery (or purportedly mediated imagery, since the imagery is computer-generated and not photographic in origin, except

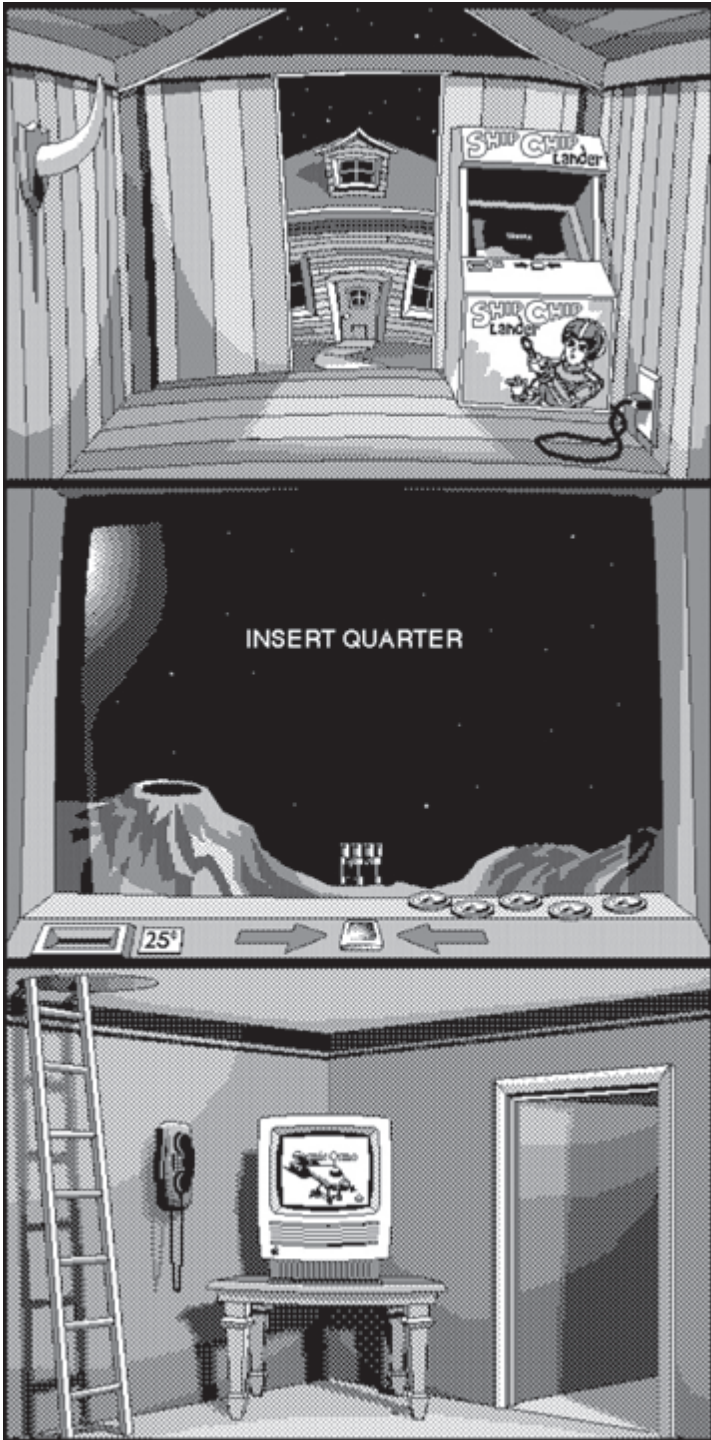


Fig. 5. Video games within the world of *Cosmic Osmo: Ship Chip Lander* (top), and the close-up of its screen (center); and *Cosmic Osmo* itself (bottom)

for the textures and video clips), the mediated imagery within the game adds another layer of mediation whereby the game imagery itself (which is made to seem less mediated than the diegetic mediated imagery) gains a more realistic feel as a result.

Even without the optical technologies present, players are able to see farther (spatially) in these games than in others of the time. One of the graphical design advances in *Myst* that can be seen developing in the early games is the ability to view other areas of the game's world before arriving at them. In most video games of the early 1980s and before, spaces either scrolled on and off the screen, or cut scene to scene or room to room, with the player able to view only one space at a time, the space they currently occupied (see figs. 2 and 3 for examples). *Myst's* diegesis gained a degree of realism by integrating its locations in more three-dimensional deep-space staging in which players could see distant areas long before they arrived there. The clock tower, spaceship, and library are all examples of locations that can be seen at a distance, requiring the player to click and move several times in order to get to them, depending on where the player is located. Examples of deep-space staging can be found in the Miller brothers' earlier games, although the most distant objects visible are never more than two or three moves away.

Deep-space staging was an important advancement for the adventure genre because it encouraged exploration by giving glimpses of spaces the player had not yet entered, and aided navigation by giving a visual sense of the three-dimensional geography of the game's world. While deep-space staging existed in earlier video games like *Night Driver* (1976), *Battlezone* (1980), *Pole Position* (1982), and *Star Wars* (1983), it was only used to allow players to see oncoming obstacles or adversaries, whereas in the Miller brothers' games it was used to create contiguity and to entice players into other areas.

The development of space in the Miller brothers' games occurs aurally as well as visually. Locations are given specific background ambiances, and sound effects are used to suggest events occurring nearby off-screen. Linking ambient sounds with particular locations was a new idea in the late 1980s; most video game soundtracks consisted of background music that played regardless of the player's location, and short sound effects motivated by game events. While ambient sounds in the Miller brothers' early games cut off abruptly once the player left an area, ambient sounds in *Myst* would grow or die out gradually as the player moved from one location to another.

For example, near the dock on Myst Island the quiet cry of seagulls and the lapping of the waves provides a calming, lulling ambience, but as the player moves up the hillside towards the library and the island interior the seaside ambience grows fainter and then is replaced by the quiet sound of the wind. Certain enclosed locations, like the bedrooms or the underground chamber near the dock, even had ambient music that could be heard faintly as one approached the room.

As in film and television, sounds of off-screen events also help to create the sense of a surrounding space where events continue to happen even though the viewer or player is no longer there. In *Cosmic Osmo*, for example, when the player drops the carrot off-screen down into the room in which Señor Osmollo is encountered, we hear the sound of it hitting him on the head, and then the sound of him eating it. Or in the test tube lab, when the player drops a test tube off-screen, we hear the crash as it shatters on the floor (eliminating the need for an on-screen animation of the event as well). In *Myst*, sounds of off-screen events gained importance as clues. The metallic clanking of the tower rotation, the bubbling water sound of the sunken ship being raised, and the periodic *ka-thunk* of the tree elevator going up or down all occur initially as off-screen sounds that the player must investigate.

Another idea developed particularly in *Cosmic Osmo* and *Myst* is that of distant consequences arising from the player's actions. In *Cosmic Osmo*, whatever the player draws on the canvas set up on the easel inside the Vegetable Moon will later appear on the canvas hanging in Osmo's den inside the Holy Mackerel. Likewise, the programming the player sets at the KSMO station will later appear on Osmo's handheld television and the TV window on the Macintosh, and the message on an animated text display can be rewritten by the player elsewhere in the game. While none of these things is necessary for the playing of the game, since there is no real objective or goal, *Myst* used the separation of action and consequence to much greater effect, requiring players to figure out how to power and operate machinery or gain access to certain restricted areas. In *Cosmic Osmo*, all of the technology encountered has a clear purpose, which most often is simply an entertaining bit of animation and sound effects. *Myst*, on the other hand, often features buttons, levers, and the like, which appear to do nothing at all when activated, offering neither entertainment nor useful, obvious functionality. Such apparent uselessness, however, often does effectively create an enigma, giving the player a mystery to solve and a mini-objective to pursue.

A device developed in *Cosmic Osmo* that would be used to greater effect in *Riven* is the idea of differing results given in response to a repeated action. Clicking on a character more than once or visiting the same location more than once can reveal new responses or information. In *Cosmic Osmo*, Princess Osmorella gives several different responses from her throne each time the player visits her. If the winding stairs are taken, she will be gone from the throne the next time the player comes to the throne room, and in her place a secret entrance is revealed. Likewise the slide fixer under the amoeba gives different responses the first and second time the player clicks on him, and ignores the player beyond that. In *Riven*, knocking five times at the door of the village hut brings an answer from a little girl, who opens a window, looks out, and shuts the window, giving no response to the player after that. And in Gehn's underwater control room, knocking on the window will provoke a series of responses from the wahrk swimming nearby, until it, too, ignores the player.

While there are many similarities between the Miller brothers' three early games and the games of the *Myst* series, there are some striking differences. In some ways, the design of the early games represents a road less traveled, as opposed to the heavily trodden thoroughfare that the *Myst* series and most other video games have taken. As children's fare, they could afford to be more lighthearted, whimsical, and downright silly, but certain aspects of the games could have been parlayed into more serious games for an older audience.

Perhaps the most noticeable difference is the games' wildly non-Euclidean structuring of space. Whereas *Myst*, *Riven*, and most other games attempt to convey a sense of a coherent three-dimensional space in order to give their worlds a feeling of spatial consistency and believability, *The Manhole*, *Cosmic Osmo*, and *Spelunx* are playfully inconsistent in the way space is constructed and connected, and navigation can only be done by experience, since there is no way to predict the way in which one space will be connected to another. Even the effects of gravity can be ignored (see fig. 6). For example, in *Cosmic Osmo*, one can get from one planet to the other either by flying in the Osmobile (which does not give any sense of distance or direction, since flights always end with the windshield filling with animated concentric ovals), or by wandering through the rooms, stairways, and imagery of the game; by looking through the telescope on Vegetable Moon, one sees the Mackerel in space, which one can then arrive at by click-

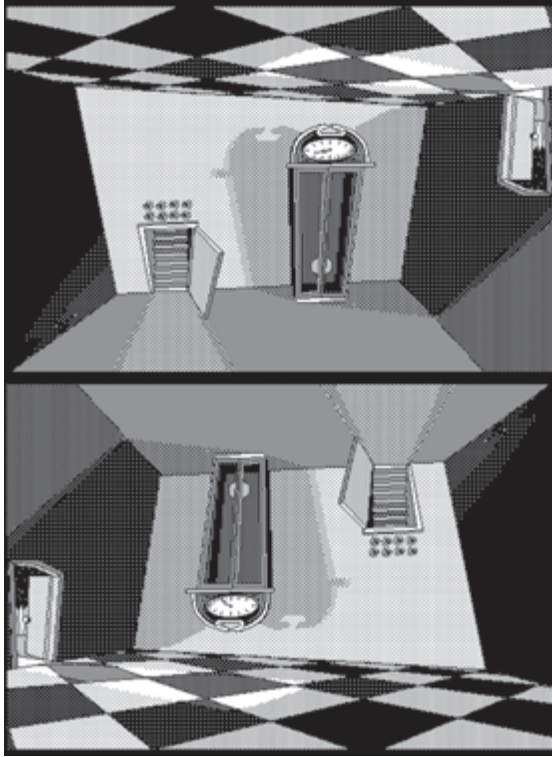


Fig. 6. A room in *Cosmic Osmo* with entrances on the floor and ceiling, allowing the player to jump to the ceiling by clicking

ing on it (the same can be done with the objects in the microscope). In *Spelunx*, an entire forest can be found by entering a door in a teapot, and in *The Manhole*, one can ride in a boat in a teacup (tea and the crockery associated with it are another indirect allusion to Carroll's very British *Alice in Wonderland*). In *Myst* and *Riven*, consistent geography and an understanding of how it is related to the maps of the islands are crucial to the puzzle-solving in the games. For example, in *Myst* the rotating of the tower to align a window with various landmarks on *Myst* Island is necessary to gain the key clues to each of the Ages, and in *Riven*, Survey Island (or Map island, as it is sometimes called) requires the player to have an understanding of the five islands and how they are related geographically.

Another device (also reminiscent of *Alice in Wonderland*) that defies spatial consistency is the changing of the perspective and implied size of

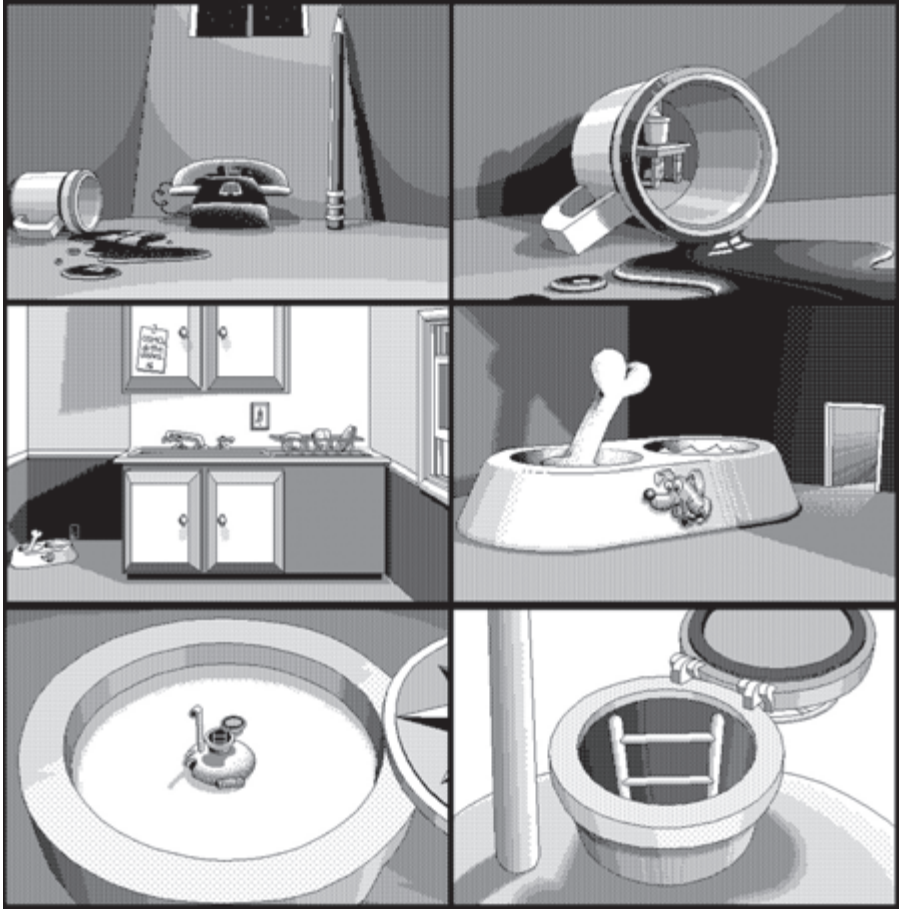


Fig. 7. The implied size of the spectator varies greatly in these examples from *Cosmic Osmo*. For each pair of images, the one on the right implies a much smaller spectator than the one on the left.

the spectator. Three examples of this from *Cosmic Osmo* are illustrated in figure 7. The left-hand picture of each pair is drawn from a perspective closer to that of what a normal-sized human being would see, whereas the right-hand pictures show the perspective of someone standing only a few inches off the ground. Each pair of pictures occurs one after the other in the game with no explanation or even acknowledgment of the apparent shift in size of the spectator (in the top left-hand picture the perspective seems already smaller than an ordinary human, and the right-hand one is smaller

still). The player appears at times to be a full-sized human, yet is able to go into tiny doors, into the little submarine that appears in a bathtub, or even down the sink drain in the kitchen. Unlike *Alice in Wonderland*, there is no moment when the player actually changes size, or is given the means (like the “Drink Me” bottle in Carroll’s story) of effecting a change.

In *Myst* and *Riven*, on the other hand, the scale of the implied spectator remains fairly consistent throughout, especially in *Riven*, where a “virtual stuntman” known as “Harold” was used to regulate perspective. According to Richard Kadrey,

To compensate for the fact that in designing shots separately, often by separate artists, the scale of the surroundings might be different from one view to the next, a virtual stand-in—a six-foot tall computer-generated dummy—was employed. This non-union guinea pig was perfect for dropping into scenes to make sure that all the props and sets were in proper scale and that the eye line the artists were using for the scene matched with the eye line from the previous scene. It would be pretty jarring to see the world from six feet off the ground in a hallway and suddenly find yourself eight or ten feet in the air after entering a room.⁵

Changes in perspective, if part of the game’s conceit, are not necessarily always “jarring,” and they are certainly part of the charm of *Cosmic Osmo*’s playfulness and whimsy. In a game for adults, such changes could be integrated into the puzzles themselves, where players could be required to find and use the means needed to change themselves to the appropriate size in order to enter tiny spaces, reach high objects, or perform other kinds of tasks. The same environments could be experienced in different sizes, with puzzles of different scales interwoven together.

Another factor in the greater spatial consistency of *Myst* and *Riven* is the use of computer-generated objects and scenery. Whereas hand-drawn images are typically drawn separately, multiple views of an object or scene can easily be generated from the same three-dimensional computer-generated models, ensuring that perspective, lighting, texture, and geometry remains consistent from one image to the next. Consider, for example the three different views of the microscope from *Cosmic Osmo* in figure 8.

In the first image, the rack of slides is positioned alongside the microscope so that its sides are parallel to the base of the microscope. In the second image, the position of the rack has shifted so that the space between the rack and the microscope narrows in the direction of the door. In the third

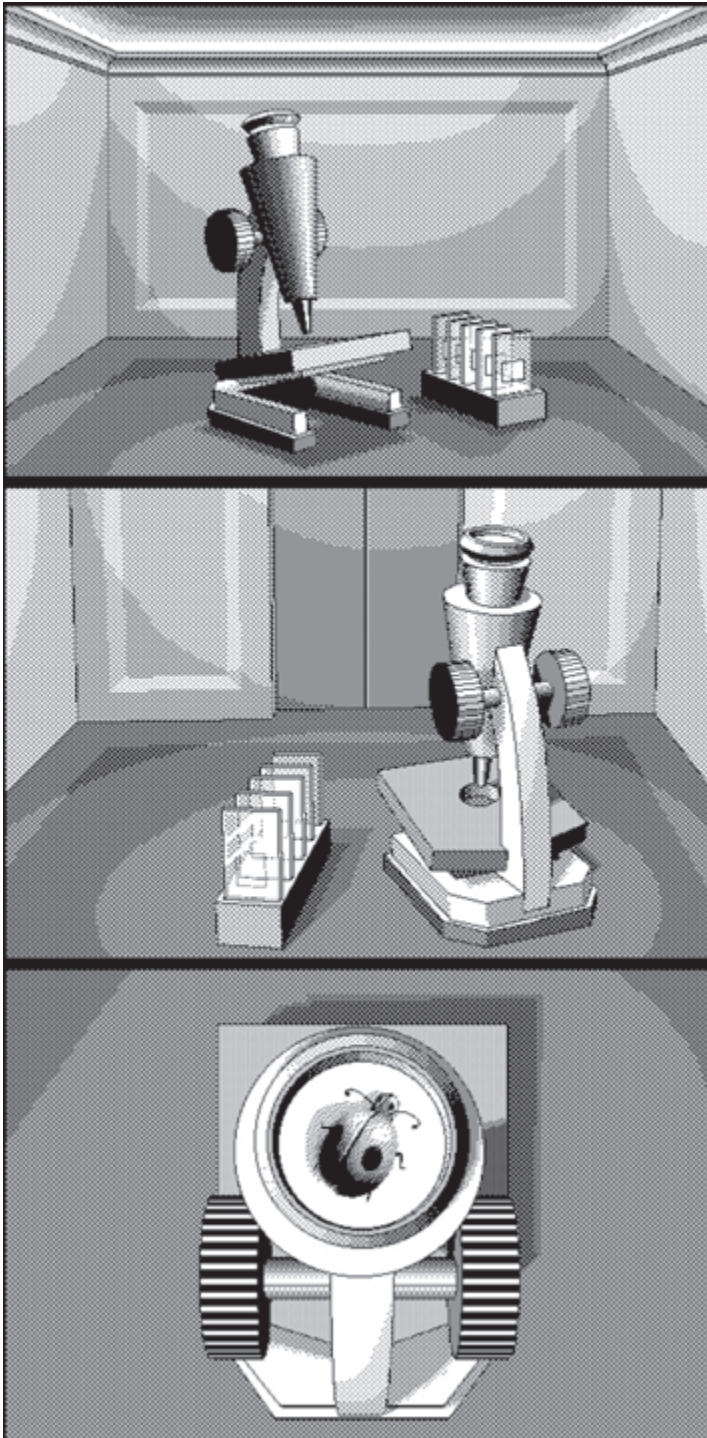


Fig. 8. Spatial inconsistencies between views in *Cosmic Osmo*

image, the rack does not even appear in the frame, despite the amount of space provided to the left of the microscope. In both the first and second images, the slide rack appears to be casting two shadows, a darker one near the rack and a wider one extending out farther, yet there does not appear to be two light sources (which would have to be located on the same side of the ceiling to produce the overlapping shadows). Such inconsistencies, whether they are inadvertent or deliberate “cheats” done for aesthetic reasons, can also be done with computer-generated objects, but hand-drawn images do not generate the same kind of expectations of consistency that computer-generated objects do. Part of the reason is the ontological status of the objects; whereas views of hand-drawn objects are drawn individually by the artist, views of computer-generated objects are calculated mathematically from a three-dimensional model in the computer’s memory. Thus when we do not see a part of the hand-drawn object, we know it is not there, whereas the occluded portion of the computer-generated model still exists as data even when it is not displayed on-screen. The objects of *Myst* and *Riven*, then, have a different ontological status than the hand-drawn objects of the earlier games, resulting in different player expectations and a different feel to their worlds.

The Miller brothers’ games also represent other ideas regarding navigation. With fewer places to go but more connectivity between them, the early games were more playful with the consistency of their worlds and less concerned with verisimilitude. Using the computer’s internal calendar and clock, *Cosmic Osmo* even included the current time and date on displays in various rooms, an intrusion of the real world beyond the game that would not be allowed in the games of the *Myst* series. By comparing the *Myst* games with the three earlier ones, we can better appreciate the decisions made regarding the direction *Myst* was to take, and the crafting of the player’s experience of the game and the world in which it takes place.

THE WORLD OF MYST



Myst is the story of a father, Atrus, and his two sons, Sirrus and Achenar. They are part of the D’ni culture, a people who have perfected the art of writing Ages, which describe worlds that can be traveled to with “linking books.” Placing one’s hand on the image inside the book, allows one to travel (or “link”) to the world described. While initially in the *Myst* mythology it was hinted that the worlds were brought into being by the writing of the books, later adjustments to the mythology suggested that the books merely allowed their users to link to the preexisting worlds that matched the descriptions authored by the writers of Descriptive Books (bringing the *Myst* universe more in line with Christian theology in regard to *ex nihilo* creation and Tolkien’s ideas of subcreation, described later in this book). When the game begins, Sirrus and Achenar are trapped in damaged linking books in the library, and Atrus is nowhere to be found, though the player finds his messages, intended for his wife Catherine, early on in the game (and in the opening sequence, Atrus narrates how he fell into a fissure, but this remains unexplained). As the player repairs the damaged books page by page, question arises who should be freed first, Sirrus or Achenar, and the role Atrus plays in the story, as well as his whereabouts, must also be discovered.

But none of this is known, initially; *Myst* does not reveal much up front. Unless one first encounters *Myst* the way I did at the Digital World Expo, dropped into the game *in medias res*, the first impression one has of *Myst* comes probably from the game’s box and the booklet accompanying the CD-ROM. Both display an image of *Myst* Island as seen from afar, surrounded by blue waters and skies. A tagline announces the game as “The

Surrealistic Adventure That Will Become Your World.” An outline of a falling person is in the clouds, suggesting Atrus falling into the fissure (or even the player’s arrival on the island). On the back of the box and booklet are images from the game, a variety of lavishly detailed and moodily lit settings. Perhaps the most striking thing about the packaging that sets *Myst* apart from other games is that there are no characters or action scenes depicted; only the handwritten note from Atrus, which appears to have been cut off abruptly, suggests anything in the way of character or action. And as it turns out, the note is deceptive, since it does not appear in the game itself, nor is Atrus dead as the note’s very abrupt ending (“before it’s too la——”) seems to imply. According to Richard Watson, the note was the idea of Brøderbund’s marketing department, and Cyan could not persuade them to change it.

Inside the booklet (which the player can only see once the game is purchased) the premise is described as the finding of the *Myst* book and the arrival at the island (which we will see and hear again in slightly more detail during the opening credit sequence). Beyond that, little is said about the game itself, and instead the booklet stresses the “realness” of the game. In “A Message from Cyan,” we are told that *Myst* is an “alternate reality,” that it has “the most depth, detail and reality that you’ve ever experienced in a game,” and that “*Myst* is real.” The player is told to “react as if you were really there,” an idea repeated again in the “Playing the Game” section, which describes the mechanics of playing, without revealing much about the game apart from a few small black-and-white images of scenery. Finally, near the end of the booklet there are three black-and-white development sketches of overhead views, which in retrospect tell us little about the game and turn out to be red herrings, since they are older designs that are different from the ones in the game.

The later two versions of *Myst* follow in a similar fashion. *Myst Masterpiece Edition* has a slightly fancier box with an embossed picture of the island, and bluer waters and a darker, more clouded, more foreboding sky. The back of the box no longer shows Atrus’s note (it has been moved inside the front flap, where the DigitalGuide is described in more detail), and concentrates instead on the new features of the new edition, which amount to better graphics and sound and a DigitalGuide hint feature. As though the original claim “*Myst* is real” was not enough, *realMYST* (tagline: “The Adventure Becomes Real”) continually reemphasizes the game’s realistic nature both on the back of the box, where it, too, exchanges Atrus’s note

for a list of new features (all relating to graphics and sound), and in the instruction booklet, which says that “*realMYST* is everything *Myst* is, but more real.” There is, however a noticeable difference in the cover images of *Myst* and *realMYST* (see fig. 9).

The *realMYST* island appears smaller, while its buildings and other salient features are larger, almost like a caricature. The land mass of the island itself is less prominent, the conical rock formation on which the tower sits is much shorter, and the rocks supporting the gear plateau are smaller as well. The differences are due to the rebuilding of the island for the real-time 3-D experience, which cannot rely on the same kind of spatial cheats used in the slide-show HyperCard-based version of *Myst*.¹ Just as it is interesting to compare remakes of films made in different eras with different technologies available (for example, the three versions of *King Kong* from 1933, 1976, and 2005), comparisons between *Myst* and *realMYST* reveal some interesting ways that technology affects the design possibilities, player expectations, and game experience, examples of which will be given in the sections below.

After discovering how little the booklet reveals of the game, the player then moves to the game itself. After the obligatory company logos (another way that the video game industry models itself after cinema, along with the opening credit sequence), the letters spelling “MYST” appear, with falling chords (along with a falling man and falling book) that set a grim and foreboding, yet not dark, tone for the game. The enigmatic backstory narration, which mentions the fissure, starry expanse, and falling book we are seeing, raises more questions than it answers and encourages players’ curiosity. When the book finally lands (which takes even longer in *realMYST*, due to several added screens of credits), everything comes to a halt except for some ambient sound, as the first interactive opportunity presents itself.² There is nothing on-screen but the book and the cursor (which becomes a hand, similar to *Cosmic Osmo*’s cursor), so inevitably the player must click on the book. The music continues as the book, now opened, appears closer, a video clip playing within the linking book’s image that shows us the journey to the island that we are about to take (one that, in retrospect, contains a clue; the location of the tall tree elevator that is rarely seen from a distance on the island, despite its height). Clicking on the image, the virtual version of placing one’s hand on the linking book’s page (which we will see various characters actually doing during the course of the game series), is now the next step taken by the player.



Fig. 9. Images of the island appearing on the boxes of *Myst* (top) and *realMYST* (bottom)

At this point the idea of the “linking book” is established nonverbally, and the hand-on-page activation is, in a way, analogous for the point-and-click nature of gameplay itself, since it is the CD-ROM that links us to the world of the game (one difference, however, is that whereas the CD-ROM actually contains the game, the linking book links to the world described in the Descriptive Book, but does not contain it). But it will be a while until the player encounters another linking book.

MYST ISLAND

After the flyover in the linking image, the player lands on a dock on the edge of Myst Island, appropriately, as the dock is a place of arrival, the sunken ship tethered to it giving a sense of the surreal nature of the place. The phrase “in the dock” can also mean “on trial,” and so the player is, as one is left standing there with no apparent objective other than exploration of the immediate surroundings. Unless, of course, the player is playing *Myst Masterpiece Edition*, with its DigitalGuide providing clues (or even solutions) and a map of the island with various locations pointed out and labeled. The more the DigitalGuide and map are used, the less the player’s experience of the game will involve puzzle-solving and the deciphering of enigmas that would normally be present, so in the analysis that follows I will assume no use of the DigitalGuide (just as players who played the original version of *Myst* would not have had it available). In some ways, the use of it is another experience altogether, one more like a cross between *Myst* and a text adventure, since many of the clues it provides have wordings reminiscent of text adventures. Therefore, the analysis that follows will concentrate on the original version of *Myst*, but will include comparisons to later versions where relevant.

Directly ahead of the player arriving at the dock is the first marker switch, and the first opportunity to interact with something on the island (the forechamber is there, too, but it is off to the side, its door lacking any handle that would indicate its function as a door; but we shall return to it later). The player then clicks on the switch, only to be propelled closer to it as the image changes to a closer view, and it is clear that another click is still needed to move the switch handle, which the player does. Apart from an animation of the switch handle moving and an accompanying sound effect, nothing seems to happen, leaving the player momentarily baffled; not only

is no objective given, but even such a deliberate action as throwing a switch appears to have no effect. (This must have occurred millions of times, with roughly the same puzzling reaction, as players began the game.) This wonderfully sets the tone for the game, where discovering the links between actions and consequences is often part of the puzzles. The marker switch is one of two types of machines that are encountered in the *Myst* series; state-changing machines (like the switches or the eight plaques on boxes that surround the fountain) that appear to do nothing or very little when their state is changed, and useful machines (like the safe, generators, forechamber imager, the clock in the clock tower, and the machine in the planetarium) that are obviously useful but only if the player knows which numeric code or sequence will make the machine function as desired. Sometimes a machine can be both. For example, the eight plaques around the fountain, taken individually, are state-changers, with green and red as the two possible states, but all eight together are used like a combination lock, which only opens when the right combination of plaques is activated.

Next the player either goes up by the gears to encounter yet another seemingly functionless switch, or goes down the walkway to the stairs, where Atrus's note to Catherine lies on the grass. At this point the player will have become familiar with the HyperCard slideshow-style series of images that can be clicked upon to change one's standpoint or position, which also introduce *Myst's* world as a consistent three-dimensional one where objects can be seen from various angles and at various distances. Atop the gear plateau, the narrowing conical hill in the distance leads the player to look up, where the tower can be seen. This is the first instance of "looking up" that will become important elsewhere in the *Myst* series, as will "looking down" (which seems to be used less often in puzzles than "looking up" is). With the slideshow-style movement, however, the player's gaze is limited to the pre-rendered views, rather than free and mobile (similar discussions can be found in film theory, where Eisensteinian montage is compared to Bazinian long takes). The player's gaze is framed and directed, so that the compositions of the pre-rendered views can both indicate what objects or places are important simply by providing views of them (including compositions that give prominence to certain objects over others), or withholding views that might give additional clues to the player. An example is the tall tree elevator; despite its great height, it can only be seen from a few places on the island, like the walkway overlooking the dock, the tower window when it is properly aligned, and right in front of it, which is the

only place it can be seen moving or in different states. Other places on the island where you could normally see it by looking up are not given any pre-rendered views, and not only is the player kept from seeing the tree from a distance, but the views are so artfully arranged that the player has no reason to believe that any views are being withheld or hidden.³ This is particularly noticeable when one compares *Myst* to *realMYST*, with its free and mobile point of view, where the player can walk between and all the way around the planetarium and see new views of the library, or off the path and into the woods where new objects like Ti'ana's grave can be found (a nod to the *Myst* novels, where Ti'ana is from). Previously unavailable angles also reveal new objects, like the ceiling fan in the room where the Stoneship Age's linking book resides, and unseen events like the rising of the ship model and the ship in the harbor can now be observed. While *realMYST* strives to keep the feel of the original, the implied size of the spectator and the distances between locations does seem quite different at times from the original. For example, figure 10 shows how the view up the hillside from the dock varies greatly from *Myst* to *realMYST*. The implied size of the player, at least at this standpoint, appears to be much smaller in *realMYST*, where the hillside appears steeper and there is less of the library and planetarium to be seen (the library pillars are almost completely obscured in *realMYST*). Also note the different alignment of the stairs and the forechamber door, which is much more prominent in *realMYST*.

Whether or not the player has taken the detour up to the gears, the next object found is the note to Catherine. The note, and the forechamber it mentions, were both added late in the design of the game to give the player another hint as to what to do next. One wonders whether this would have been deemed necessary if the original version of *Myst* had the DigitalGuide providing verbal clues, or if the game would have been just as successful without the added help provided in the forechamber. Since the forechamber is there, it is hard to say just how difficult the game would have been without it, since in 1993 the tradition of the kind of visual, situation-based puzzles one finds in *Myst* was simply not as rich as it is today (thanks largely in part to *Myst*). At any rate, the forechamber provides the player the first example of an obviously functional machine, perhaps allaying the growing frustration that the player may have experienced up until this point. The player is given several numbers to enter, two of which are useful and one of which is the interesting but ultimately extraneous topographical extrusion map. Another red herring occurs at the end of Atrus's recorded message

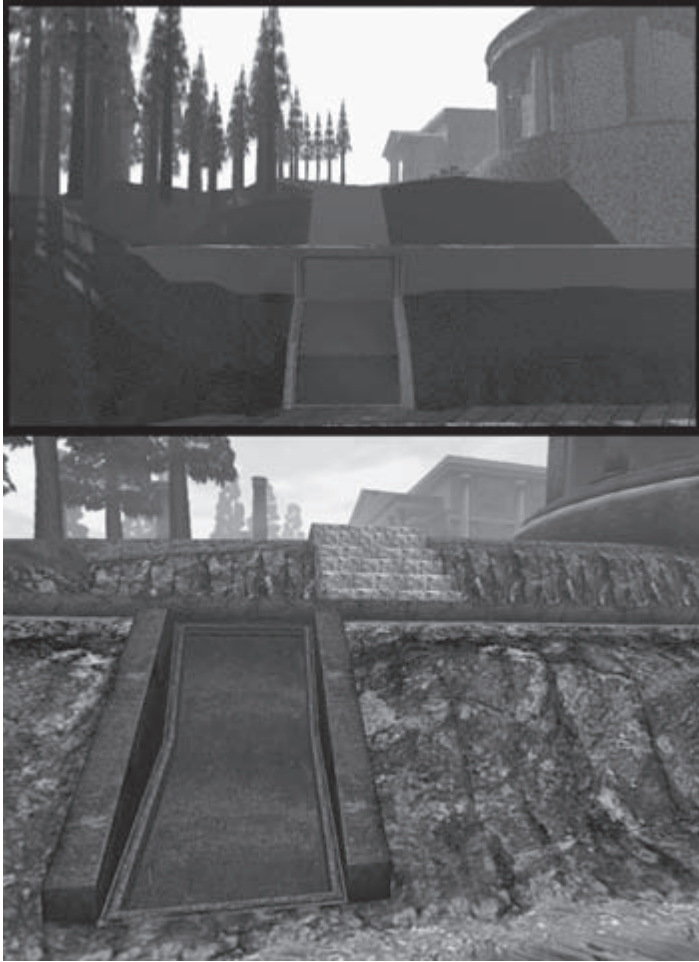


Fig. 10. The differing views from the dock in *Myst* (top) and *realMyst* (bottom)

on the imager. After giving some background to the situation at hand and alluding to things elsewhere on the island (the hiding places of the linking books and the tower rotation), he tells the player to erase the message on the imager, which sounds like a good idea, and yet there is no way the player can do it. Considering how urgent Atrus sounds in the message, this seems, in retrospect, a bit of a joke made by the game designers (one of which is, of course, Rand Miller, who plays Atrus, a rare example of a game producer and designer starring in the live action imagery of his own game).

The design of the forechamber is typical of locations we find throughout the *Myst* series, as it includes what we could call the “on the wall behind you” effect. When we enter the chamber, we first see the imager, but it is only when, after puzzling over it, we finally turn around to leave that we notice that there is something on the wall behind us that we passed by when we entered the room. This will happen again with the wall safe in the cabin, the note pinned to the wall in the underground generator room, the light switch in the planetarium, and numerous other places in the other Ages and *Myst* series games. Even when one is aware of this device, there are enough variations on it (like looking up and down, or closing a door to reveal something behind it) to keep the player guessing and engaged. Another more noticeable element is the mood music in the forechamber. Although the music appears to be nondiegetic (that is, not coming from a source within the game’s world, and not something that the game’s characters could hear), it is still location-specific and designed to add to the player’s experience of the location. Throughout the game, location-specific mood music generally occurs in (and signals) those locations where the player stays awhile to solve some problem, or operate a machine, or just search or look at details. Finally, the forechamber’s underground location, which is no doubt due to its late appearance in the landscape, is also a nice reference to the underground world found in Crowther and Wood’s *Adventure* program, and a foreshadowing of the great underground world of the D’ni civilization itself.

Continuing past the note up the hill brings us to the planetarium (or rather, what we will come to discover is a planetarium, once we’ve turned off the lights and looked up to notice the stars on the ceiling). Here we encounter our second combinatorial machine, which gives small constellation maps when dates are entered into it. Unlike the imager in the forechamber, playing around here will not get us very far; if we were too lazy to go around the island and count the number of marker switches to enter the correct number, we could have simply started at two or three (since that’s how many we already encountered so far after arriving at the dock) and keep trying until the message appeared after “08” was entered. But the machine in the planetarium has far too many combinations to sample; the 12 possible months times 31 days times 10,000 possible years times 1,440 minutes per day gives us 5,356,800,000 possible settings (which includes thousands of impossible dates like February 31). And at this point, the correct combinations are not noticeably different from the wrong ones, with-

out a sense of which constellations are useful ones, or why we need to see them at all.

After the planetarium, provided one is not lured away toward the fountain or spaceship, the next place encountered is the library. Inside, the bookcase is positioned in the center so as to be the first thing one notices upon entering. On the bookcase itself (in the closest view) the viewer's eye is guided to the four books whose spines are wider and more brightly colored (we later find out that this is because the books are unburned), which turn out to be the books containing information about the various Ages (another book, hidden amongst the burned ones, contains 300 patterns that narrow down the possibilities of some other combinatorial machine that remains unknown until the player ventures into the fireplace). It is not surprising that the library should be the heart of Myst Island since books are central to the game and the D'ni culture, giving *Myst* a strong pro-literacy stance rarely found in video games. The four books, which are journals about the Ages (or five in *realMYST*, when the book for the Rime Age is added), each contain visual clues about the geography of the Ages and some of the machines there, and in the case of the Selenitic Age, the player is given a five-note sequence at the end of the book, the solution to a problem that has not even been encountered yet. The term "Age" also suggests travel through time (although this does not appear to be the case), and adds to the feeling of going to somewhere very different and remote.

It is unlikely that any player will read all the books before leaving the bookcase, and so an interesting reversal occurs; after being given frustratingly little information up until this point, the player has now been given so much that most players will likely leave some of it untouched until later, raising the question of how much information a particular player needs to move on. This may also have the function of eliminating further frustration regarding clues, since the player will have to acknowledge that some information was left behind for later viewing.

After the player leaves the main bookcase, and before the machinery of the library is explored, the player will likely find the red and the blue books, each sitting out in the open on a shelf on either side of the library, with a color-coded page next to it. Opening the book starts an animation in the linking image window. The results are similar for both books: interference and static obscure a communication being made (we do not know if it is live or a recording, at least initially) and in each case we do get two pieces of information clearly; the speaker's name (Sirrus in the red book,

Achenar in the blue book), and the request for pages of the book's color. The page nearby serves as a test; when inserted in the book, the communication channel becomes clearer, more is revealed about Atrus's two sons, and more pages are requested. Since only one page can be carried at a time, the player must decide which book to add pages to, and even if one alternates, the player will still need to choose which book to complete first. As a later search of the island reveals, there are no more pages to be found, so now the player has additional motivation (beyond that of mere exploration) to travel to the different Ages of the game.

With the library's information available, the player can now begin unraveling the three layers of puzzles that lead to the linking books for the other Ages. The first layer involves learning to use the machinery of the library and observatory tower in order to obtain clues for the next layer, and once a player has an understanding of how these work, the same operations will reveal clues for each Age in turn, using the same methods. First, of course, the player will have had to switch on the marker switches to activate the locations on the map. And the map is not immediately visible as well; when the player enters the library, the view includes the bookcase and the two framed images on the walls on either side that open and close the secret passageway behind the bookcase. When the player clicks on either side of the screen, the point of view is turned 180 degrees, and only the doorway framing a view of the island is seen, bypassing the map, fireplace, and the red and blue books. Only after turning away from the bookcase toward the doorway one has just entered and then turning back again do views of these items become available (quite unlike how one would experience it in person). Once the player has activated the map and clicked on the tower long enough to rotate it, the tower rotation (signified by both a sound effect and the flashing words "tower rotation" to make it as clear as possible; the presence of redundant visual and aural information will be discussed later) is the next step, although the reason for rotating the tower is not yet clear. Finally, the ability to open and close the bookcase is required, which the player is likely to discover even before learning why the tower rotation is needed. If the player does venture into the tower before rotating it to one of the island locations on the map, another enigma is created that is only explained in future visits once the rotation occurs. When the player is successful, music greets the player once the elevator door opens in the tower, indicating that there is something to examine in the room, whereas previously neither music nor clues were present. In addition, the tower is

designed in such a way that the player might notice the “book” side ladder (since the elevator opens right in front of it) and miss the “key” ladder on the other side. The fact that one cannot walk around the elevator on the library level could discourage one from exploring behind the elevator on the tower level, and keep the keys from being seen.

The key clues given on the plaques in the tower are the combinations that lead to the second layer of puzzles, each of which, when solved, will give either clues or access to the third layer of puzzles, which when solved, will give the player access to the linking books. The first step in solving the puzzles is learning which clues go with which Age. While the tower clues and the clues found in the books in the library are clearly connected to particular Ages, others like the generator room or the clock tower are less obvious at first (although in retrospect many of the connections seem very obvious). We could describe the two layers of puzzles for each Age in the following way: for the Stoneship Age, there is the control panel in the planetarium for which we are given dates, and then the plaques around the fountain that correspond to constellations (the Stoneship book links the constellations to their shapes as displayed on the plaques). For the Mechanical Age, there is the setting of the clock in the clock tower, and then the machine with the levers inside the clock tower (some machines in *Myst* do not appear to have either names or functions apart from selecting one combination out of many possibilities). For the Channelwood Age, there is the wall safe, and then the giant tree elevator. For the Selenitic Age, there is the powering of the spaceship, and then the playing of the organ inside it. For the Rime Age, there is the finding of the switch that opens the door into the chamber beneath the spaceship walkway, and then the combinatorial machine that hangs from the ceiling inside the chamber. Only the linking book back to Dunny (called “Dunny Age” in the game’s program file names, even though it is not an Age, revealing how the importance of Dunny (later D’ni) evolved as the world of *Myst* grew) has only one layer of clues (the right pattern for the fireplace panel), but getting the number of the right pattern requires getting enough of the red or blue pages from the other Ages first.

Once the last puzzle for an Age is solved, the player is finally given access to the linking book for that Age. Taking the giant tree elevator into yet another underground chamber, the player finds the Channelwood Age linking book waiting directly ahead, and likewise in the spaceship the book is present where the player is. The Stoneship Age and Mechanical Age link-

ing books, however, are not present, but a model indicating the actual hiding place moves to indicate some change in its large-scale counterpart. The trickiest linking book to find is the one for the Rime Age. When the right combination is entered into the machine hanging from the ceiling in the underground chamber, it merely rises into the ceiling, leaving the player to wonder where the book is. Conditioned by the other Ages, one expects to find it right away, since there are no miniature models in the underground chamber. Instead, it turns out to be a geographical puzzle, the solution of which the player more than likely stumbles across than figures out, when the library is reentered.

Given that there are six different places to travel to using linking books, is there any particular order that the player must visit them in? It would appear from the design of the game that the Rime Age is designed to be seen last, and Dunny second to last (or last in the first two versions of *Myst*). While the Stoneship, Channelwood, Mechanical, and Selenitic Ages are designed to be encountered in any order, getting the combination for the machine in the underground chamber (beneath the spaceship walkway) involves going to Dunny first, and the clue for getting to Dunny is given by Sirrus or Achenar after one has brought back pages from the four Ages that have them. Of course, one could travel to either Dunny or the Rime Age without having been to the other Ages, if the right combinations (for the underground machine or the fireplace panel) are guessed correctly. Which leads us to another question: Are players more likely to encounter the other Ages in a particular order, or are they all equally difficult? Which Ages are the easiest ones to get into, either by solving the puzzles or by stumbling into the solutions by chance?

While many of the puzzles in *Myst* involve the player's intuitive grasp of how the world works, including the geography of the island, the ability to make connections (for example, between the large and small sunken ships), or the making of analogies to real-world technology (like the throwing of the breaker switches to reset the generator), the combinatorial puzzles require the right combination rather than intuition (although the machine with the levers in the clock tower requires the player to figure out how to spin the lower gear without changing the ones above). The right combination is something that must be found, not figured out, and most often one cannot guess at it; for example, the control panel in the planetarium, with 5,356,800,000 possible settings, makes a brute force search impossible.

Ironically, the Stoneship Age is still probably the easiest Age to get into, because one can bypass the planetarium machine altogether and simply guess at turning on and off the plaques around the fountain with the miniature ship in it. Because there are eight plaques that each have two states (green and red), there are only 256 possible combinations. Of course, this is assuming that no plaque needs to be pressed more than once, and that the plaques need not be pressed in any particular order. If the plaques were used only once but the sequence in which they were pressed mattered, the number of combinations would jump to 336 for three plaques ($8 \times 7 \times 6 = 336$) or 1,680 for four plaques, 6,720 for five plaques, 20,160 for six plaques, or 40,320 for seven or eight plaques. If plaques can be reused in the correct sequence, there are even more possibilities, and no limit to how many need to be pressed before the combination is reached. But this is not the case, and the Stoneship Age is, I believe, the easiest Age to enter by accident. I have even seen it happen: while visiting me and trying *Myst* for the first time, a friend of mine randomly clicked on three plaques without knowing what he was doing, and actually stumbled across the right combination that raised the ship. He was not all that interested in the game and did not play for very long, but had he continued, he still would have been faced with the question of the purpose of the machine in the planetarium.

Looking only at the solving of the combinatorial puzzles by brute force, we find that there are 300 pages worth of settings for the fireplace panel, one of which reveals the linking book to Dunny; 1,000 possible combinations for the safe in the cabin connected with the Channelwood Age; 3,888 possible combined settings to try to get into the Mechanical Age (144 for the clock [12 hour hand positions times 12 minute hand positions] times 27 for the machine with the levers [three levels of gears, each with three settings $\{3 \times 3 \times 3\}$]); 10,000 possible combinations for the Rime Age combinatorial machine in the underground chamber; and even more possibilities for the Selenitic Age, which first requires the right voltage (which could be any number from 1 to 99) and then the right sequence of notes on the organ (with 36 keys to choose from, there are 36^5 or 60,466,176 five-note sequences possible [although the book in the library reveals the sequence, so no guesswork is needed]). There is also the factor of how long it takes to enter a random guess into one of these machines; one can try random numbers on the cabin's wall safe fairly quickly, whereas entering each pattern on the fireplace door is a far more laborious process. At the same time, some clues

are readily available in the books in the library, like the five-note sequence for the organ, whereas other puzzles, like the giant tree elevator, rely not on clues but on the player's ability to connect actions and consequences. In the end, the order in which the player encounters the Ages will be based on the player's own strengths and weaknesses, which also come into play within the puzzles contained in the Ages themselves. That the puzzles involve different approaches and ways of thinking is yet another way that *Myst* is able to reach a broad, crossover audience.

Before we leave *Myst* Island for the other Ages, it is worth noting a few of the general changes added to the island in *realMYST*. Whereas the earlier versions of *Myst* used ambient sounds and a few background animations to bring the island to life and give a sense of time passing, *realMYST* has a sun that rises and sets, and gradually changing lighting conditions (as the day wanes, night falls, and a new day breaks) over a roughly half-hour cycle.

Figure 11 shows some of these different conditions, although black-and-white illustrations do not give a sense of the subtleties of color as the light shifts. The top image is of late afternoon, and in the second image, taken 6 minutes later, night has fallen. The third image, taken 12 minutes after the second one, is right before sunrise. Because distant objects are rendered closer and closer to gray to simulate haze, the tower behind the library appears as a pale silhouette rather than the darker silhouette that it would be under real lighting conditions. But this only occurs for a short time, and in the fourth image, taken 3 minutes later, the sky has brightened enough to balance out the tonal differences. Shadows, however, never change or move, and the light is always a diffuse, ambient one, compared to the very bright and specular light in the earlier versions of *Myst*, where lens flares and very black, high-contrast shadows can be found.

The cycle of day and night continues even when the player goes indoors, so that one may emerge from a building and abruptly realize the passage of time. The sky above the island also features passing clouds, which always move from left to right, regardless of what direction the player is facing (although the illusion is done so smoothly that the inconsistency is hardly noticeable). There are also more butterflies and birds flying around the island, adding a bit of life to the place. All the new angles and the changing variety of lighting conditions give players much to explore (as well as some new areas, as mentioned above), even if they are already very familiar with the island and all the other Ages.



Fig. 11. Varying lighting conditions during the cycle of day and night in *realMYST*

THE STONESHIP AGE

Having used a linking book to travel to *Myst* Island, the player can watch the preview of the Age about to be entered, which, unlike the *Myst* book, loops repeatedly. When the player links to the Stoneship Age, the point of arrival is on the deck of the ship facing into a stone entrance leading underground. In *realMYST*, however, the player's first view is turned around 180 degrees, facing the stern of the ship and the stairway leading down into it. Another striking difference between the two versions is the weather; in *realMYST* the sky is overcast and rain is falling, whereas in *Myst* it is a bright sunny day in the Stoneship Age, and dark, high-contrast shadows lie across the wood of the ship's deck.

Without using the pump, the only places the player can go are the lighthouse, in which there is a ladder leading to a locked hatch and a key chained to the floor, and the telescope, which while being a nice vantage point does not reveal anything useful as yet. The pump buttons under the umbrella give us access to the other places, and they are far enough away from the areas being pumped that even in *realMYST* one cannot run and watch the progress of the water draining away; it is always gone by the time you arrive. The arrangement of the pump buttons (ship, rock, lighthouse) combined with the default tendency in the Western world to read left to right, means that the buttons are arranged in the opposite order of what the most efficient walkthrough would use, with the ship the most likely place to be drained first. After draining the ship, we can venture inside, but it is dark and there appears to be nothing to interact with or read.

Next is the dark passageway inside the stone entrance. As one descends the stone stairs, the screens get darker and darker until they are completely black, leaving one clicking in the center of screen and hoping to get somewhere safely. It can be a good, scary moment of being lost in the dark (especially if you have your room lights turned low or off), and very few first-person video games feature complete darkness. Oddly, the experience does not occur in *realMYST*, where the stairway is dimly lit at all times, even when it is night outside. In the darkness the player misses the door with the red square on it that leads into the walkway to the compass (nor can it be opened in the dark even when you know where it is), but in *realMYST* the door is visible and one is even allowed to enter it. At the bottom of the stairs there is a small green light glowing in the darkness, waiting for us to dare to press it, with no indication of what lies beyond it (the player may have also

encountered a similar situation on Myst Island on the way to the generator). The game's instruction booklet has already removed some of the suspense by saying "And like real life, you don't die every five minutes. In fact, you probably won't die at all." It does, however, let a little doubt remain, as the player presses the button and the door opens with a loud abrupt sound.

Instead of finding a dank basement or dungeon, we arrive in an elegantly appointed bedroom, and the red page there suggests that the bedroom belongs to Sirrus. The room seems to tell us something about its owner; it is neat and clean and symmetrically arranged, well lit, with globes, classical-style paintings on the walls, and a tidy writing desk and chest of drawers. The desk drawer contains a possibly diabolical clue; syringes and what appear to be drugs. On top of the desk is a strange little animated plaything, one of several different kinds we shall see throughout the game. Such little animations that do not function as clues add a bit of richness and whimsy to a game that might otherwise seem too utilitarian (though, of course, we do not realize they are functionless when they are first encountered).

In the left-hand top drawer of the chest we find what appear to be gold and silver coins (of the same pattern that was on the door of the planetarium), and in the right-hand top drawer, some gems and a necklace (inexplicably, this drawer is empty in *realMYST*). Another drawer holds plates, cups, and wineglasses (all of which look better in the original *Myst* than they do in *realMYST*, where they appear polygonal instead of round and smooth). The next drawer contains bolts of cloth and a flag bearing the insignia of the Black Ship, which was mentioned in the book about the Mechanical Age (although anything that appears in two places seems like a clue, the Black Ship turns out to be just a detail in an undeveloped part of the backstory, and not crucial to either the puzzles or the plot). And finally, after an empty drawer, we find the red page in the bottom drawer (just as the game's design assumes the left-to-right order of the pressing of the buttons under the umbrella, the opening of the drawers in top-to-bottom order is assumed, with the page appearing the last drawer to be opened).

On the other side of the stone is a passageway leading to Achenar's bedroom, and its location suggests that we are meant to find his bedroom after Sirrus's. Whereas the background music in Sirrus's room was relaxing and smooth, though with a hint of intrigue, Achenar's bedroom is scored with slow, low-toned, foreboding music suggesting sorrow and something gone wrong. His room is asymmetrically arranged, lined with dark wood, bones, antlers, primitive masks, and (in *realMYST*) slowly swinging lamps

that barely light the place. The bedspread is dirty and unattractive. The rib cage so prominently displayed as we enter suggests skeletons and imprisonment (a cage), and jars of poison sit out on the tabletop beneath it. The holographic toy that morphs a rose into a skull also fits the persona being developed. As for clues, there is only the blue page waiting for us on the bed, and one half of a note in one of the drawers of the map cabinet. Visitors to other Ages will also have similar impressions of SIRRUS and ACHENAR based on the contents of their rooms, but the sons and their father, along with the frame story, will be discussed in a later section.

With either the red or blue page in hand (since only one can be carried at a time), the player is ready to return to *Myst* Island. Draining the lighthouse, however, gives us access to a wooden staircase spiraling down the wall, at the bottom of which we find a large wooden trunk. It can't be moved, only drained by a spigot on its side. And that's all there is to do. At this point we have encountered one of *Myst's* environmental puzzles, perhaps the best kind of puzzle found in the game. Unlike the puzzles involving machines or written clues, they involve problem-solving that requires the player's knowledge of how the conditions of the environment can be manipulated (for example, turning on or off the lights, draining water, turning on a heater, and so on). These puzzles are the most integrated into the game's world, and will often make use of things that do not appear to be part of a puzzle (like the light switch in the planetarium), which make them more difficult and more elegant in their simplicity. The lighthouse puzzle requires players to consider that the drained wooden chest will float, so the player must drain the chest, close the spigot, and then flood the lighthouse, to bring the chest up to the key. Even if the player realizes the chest may float, there is little reason to do so unless the connection is made between the lock on the chest and the key chained to the walkway above, which the player may have already mentally connected to the lock at the top of the ladder. Such misdirection and artful use of simple things combine into nice puzzles that can be quite hard to solve yet seem simple in retrospect. (Another such puzzle appears in the Rime Age, at a point where there seems to be little that the player can do.)

Once the chest is opened, the key inside can be used to unlock the overhead hatchway. The key and the lock both drop away and fall into the water. And sure enough, if the lighthouse is drained again, there they are on the ground at the bottom of the staircase; a little extra detail that can be easily missed by players (in the original version of *Myst*, the key can even be

picked up again at this point, though it has no further use). Upstairs, the battery and charger await us. The battery and the giant tree elevator are the only two puzzles in which the player must do something within a limited amount of time, although both can be reset, allowing the player to try again, and neither really requires split-second timing for success. It may even take a while for the player to determine what exactly the battery is powering. The player will now have to drain the rock and see the lit halls, and it is at this point that the hidden passageway behind the sliding door with the red square on it can be found. Inside the passageway, the compass presents the next part of the puzzle, and the right button must be pressed before the battery runs out (and there's only one chance, since the lights go out and the buzzer goes on if a wrong choice is made). Seeing this area for the first time is likely to slow down the player and require another charge of the battery (and perhaps even a rechecking of the telescope, once the connection to the compass is made). In *realMYST*, however, the player already has access to this area, which changes the order in which things are found and experienced. Since the telescope is easily accessible, a player might press the correct button on the compass, only to have nothing occur because the battery has not been charged.

Finally, when the lights are turned on, and the ship is drained, the player can go down into the ship and find the empty desk that produces the *Myst* book when it is clicked. The mysterious image in the *Myst* linking book, which is also our first view when we arrive back on *Myst* Island, turns out to be the library ceiling; the player who has missed this view thus far will be momentarily disoriented until he or she realizes what angle is being viewed. In *realMYST*, however, the point of view is automatically adjusted to a view of the library walls, so this little momentary enigma is lost (though presumably most people who bought *realMYST* had already seen or owned another version of *Myst*).

THE CHANNELWOOD AGE

The preview movie in the linking book does not reveal much of the Channelwood Age apart from the windmill, except in *Myst Masterpiece Edition*, where the first click on the linking book image takes the player not to the Age, but to a large version of the linking book movie, which in the case of the Channelwood Age gives the viewer a better look at the Age. We arrive in the Age standing at the end of a dead-end boardwalk, where a tree rises

out of the water. A pipe also appears in the frame, one that really has no use except to attract our notice upon arriving. In *realMYST*, our starting point faces the water rather than the tree, perhaps because we are standing closer to the tree this time.

A preliminary exploration reveals a network of pipes, leading to elevators, a locked door, and gaps in the boardwalks, most with motors nearby. The windmill appears in the background of many of the views, providing the only ambient movement. The inevitable trip there reveals the water power for the pipes, which we must guide to the various machines. Here again we encounter the combination of visual and aural information that we find so often in *Myst*. Both the valves and the sound of the water flowing in the pipes let us know where the water power is going, and one could even trace the flow of the water using either the visual clues or the aural clues by themselves. Such audiovisual redundancy makes the clues easier to find, and also alerts the player to use multiple registers during the exploration of the Ages, skills that will be especially required in *Riven*. Yet sometimes the player's desire to be observant is deliberately blocked; although we are given hints that there are huts and walkways up in the trees, we are not given any good views of them from the boardwalks (the instruction booklet tells us to "act as if you were really there," but never says we will get views of whatever we want to see; only in *realMYST* will we get to look more freely about the environment [which also makes solving the maze much easier]).

The next question the player faces is where to send the water. With all the valves left in their original state, the water flows out to a useless pipe that merely goes back underwater. The easiest choice, requiring the resetting of only one valve, sends the water to the engine by the stairway behind the locked door, itself something of an enigma as a stairway, unlike an elevator, would not need power (nor does it seem likely that power is required to unlock the door). The next easiest choice is an elevator, and beyond that is the machine that raises the bridge, which leads to the more distant elevator (which still is without power). This second elevator is more work to power than the first, and so it appears that it was designed to be encountered later. One could extend the bridge and pipe and use the elevator, only to find the linking book back to *Myst* Island, which typically would not be used until the Age has been fully explored.

Taking the elevator up to the first level, we find a mazelike arrangement of tree huts and walkways connecting them. The smaller, rounder ones look alike, and the constant changing of direction can be disorienting (albeit in



Fig. 12. Despite the presence of a switch in the foreground, the DigitalGuide claims, “There’s nothing of interest here.”

a pleasing and fun way, if you like mazes). Even in *realMYST*, where turning around does not involve jumping between still images of different views, the effect is still much the same. *Myst Masterpiece Edition* provides a map of the Age, but it represents both lower and upper levels in one image, and not everything is labeled (there’s also a mention of a “windmill staircase,” though none exists), nor are there any “you are here” arrows to locate the lost player. The DigitalGuide provides hints and clues, but sometimes they do not seem to acknowledge what is right in front of the player. For example, in figure 12 we see the switch that opens the staircase door, yet the clue tells us, “There’s nothing of interest here.”

The player must find the way to the staircase door and the switch that opens the door, but there is a simple rule that will allow the player to find both easily and in the right order. When you leave the elevator right after arriving, all you need to do is to keep choosing the rightmost walkway at every junction. This takes the player to the switch, and then to the stairway door. After descending to power the elevator, the player can ascend to the second level of huts.

The second level of huts is designed to be seen in a specific order; Achenar's temple, then his room (which is behind it), then SIRRUS's bedroom, which is hidden from us using the "on the wall in back of you" effect, with the walkway to SIRRUS's bedroom going behind the elevator. Opening the door to Achenar's temple triggers the projected message over the Venus flytrap-like offering table, one we might suppose is intended to intimidate the primitive indigenous people of the Age and gain their submission (a similar situation and door-triggered message occur in *Riven*, where Gehn lords it over the villagers). The carved masks, the low, slow music, and the spartan furnishings identify the room as Achenar's even before the message appears.

Beyond the temple we come to Achenar's bedroom, where a blue page awaits us. While the room is so sparsely decorated that the bedframe does not even have a mattress on it, the furnishings do vary greatly from one version of *Myst* to another. In the earlier versions of *Myst* the back wall of the room is empty, while in *realMYST* there is a table in the back with spikes, shackles, spears, and sticks, underscoring Achenar's cruelty in a way that the early versions do not (see fig. 13).

The imaging device containing the temple message is also there, with four recordings, and the one on the far right (the one which is most likely to be read last) is a taunting message from SIRRUS to Achenar, which also warns, "He is preparing. Take only one page, my dear brother." While it could be a reference to the sons' destroying of Atrus's books, no further explanation of the comment is ever given. Beginning with the note and imager message on *Myst* Island, messages left for others and journal entries are important expository devices that would be used again in *Riven* and later games of the *Myst* series. While most of these are worked into the storyline fairly well, some are not. Half of one such note is found in one of the drawers under the bed in SIRRUS's room (the other half was in Achenar's room in the Stoneship Age); this note tells how to access the marker switch vault, but is not addressed to anyone in particular. Even if we assume it is intended for Catherine, there is no clear reason why it should have ended up with each half in bedrooms in different Ages. Likewise, one could ask how all the red and blue pages ended up where they did. Like many of the machines, then, the pages are motivated more by the game's structure rather than the game's narrative.

SIRRUS's bedroom is again finely furnished and neat, except for some bottles lying around and the broken chairs at the back of the room, which

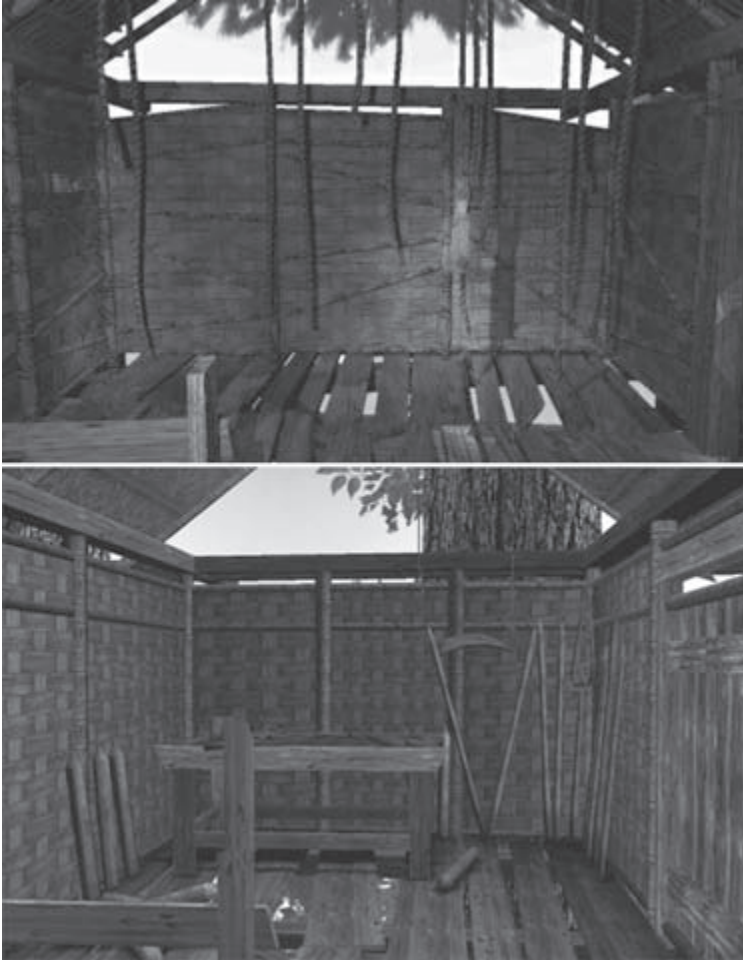


Fig. 13. Achenar's room contains more furniture in *realMYST* (*bottom*) than it does in the earlier versions of *Myst* (*top*).

are presumably Achenar's way of repaying Sirrus for putting messages on his imager. Here, too, some designs have changed in *realMYST*; in the earlier versions of *Myst*, there appears to be a dark slice of something like cake on the plate on the table, but in *realMYST* it looks more like a yellow wedge of cheese. The pattern on the bedroom door is also different. Yet despite the fact that new models were made for the objects and locations, a few things, like the messages on the imagers and the halves of the note about the



Fig. 14. Achenar's bedroom, exterior view, in *Myst Masterpiece Edition* (top), and *realMYST* (bottom)

marker switch vault, use the same graphics as the original version of *Myst*, resulting in low-resolution images that are blown up and look blurred as a result. One would at least expect that the halves of the note would have been redone, since they have text on them, which would have been easier to read with better resolution.

As mentioned before, there is a great difference in lighting between *Myst* and *realMYST*, and this is perhaps most noticeable in the Channelwood Age,

where the overhead foliage casts shadows on all the walkways and huts. Even in the black-and-white versions of images in figure 14, one can get a sense of the difference in mood created by the lighting and the details of the digital models used. The hard, specular light in the top image (from *Myst Masterpiece Edition*) gives the scene greater contrast, darker shadows, and more of a sense of foreboding, while the flat, diffuse lighting in the bottom image (from *realMYST*) is less moody and atmospheric. The computer modeling used in *realMYST* is geometrically simplified for real-time 3-D rendering (note how the boards of the walkway are more even and regular than in the top image), but it allows greater detail and player interactivity, even while placing limitations on the graphics and the lighting of the scenery (some specular lighting with hard shadows does occur in *realMYST*, but only in smaller, enclosed locations such as Achenar's bedroom in the Stoneship Age, where swaying lamps cast moving shadows). The image quality is much higher in *realMYST*, however, as the real-time rendering of the 3-D models also makes a variety of resolutions possible, and *realMYST* can be displayed at varying resolutions from 640 by 480 pixels to 1,920 by 1,440 pixels.

Finally, once the red or blue page is in hand, the player descends to the walkway and uses the third elevator to the Myst linking book. The Channelwood Age and the Stoneship Age, both by Robyn Miller, are the most painterly, and have the most subtle lighting effects and natural imagery. The Mechanical Age and the Selenitic Age, both by Chuck Carter, have a very different look and feel, containing mostly machinery, metal, rock, and sand, and it is to these that we now turn.

THE MECHANICAL AGE

The clock tower puzzle is another case of the player having to find out how actions and consequences are connected, since the clock cannot be seen when the wheels are turned on shore. In *realMYST*, however, both can be seen at once, making the control of the clock a little easier. Once the player is inside, the correct combination leads to the opening of the small gear, as well as the big one on the island. Players stand inside the giant, opened gear before linking to the Age, and find themselves standing inside another one after linking; only by moving does the change of Age become evident (*realMYST*'s point of arrival is slightly farther back, and the ocean can be seen).

The pedestal with the four-symbol combinatorial machine and the closed metal stairway provide some initial enigmas, but the player can pass

them by and enter the fortress, gaining access to both throne rooms (instead of bedrooms) right away without any puzzles to solve. The forked hallway makes both throne rooms equally likely to be seen first, and the décor of both further affirms the personalities of the two sons established in the sets of bedrooms in other Ages. Sirrus's room has paintings, luxury items, colored crystals in boxes, models, and a telescope, and his hidden room contains crates and coins on the floor, another red page, a wine rack with bottles, and the note from Achenar regarding Sirrus's greed and tax, which Achenar says his subjects will not pay, indicating further strife between the brothers. In *realMYST* the crystals are animated, and the tapestry undulates slightly. Even the skeleton seen in the telescope when the fortress faces north is given an ambient swaying movement, along with the changing lighting of day and night behind it.

Achenar's room is again a dark and dismal place with weaponry lying in disarray and another carved wooden face on the wall, and his hidden room contains crates, a rack of poisons, and an electrified cage, which in *realMYST* has a nice little animation of sparks and smoke when the switch is thrown. Achenar's throne room also has the fortress rotation simulator, a practice machine that associates directions with sounds, which the player must learn as the real rotation controls only indicate direction by four sounds (the same sounds that are also used to indicate directions in the maze in the Selenitic Age). In *realMYST*, a few things change; the helmet and sword lying on the trunk are gone, and the chain links are now rectangular instead of rounded, due again to the economical 3-D modeling of the objects.

Some directorial guidance also occurs in *realMYST*. In both sets of rooms, when the player passes from the throne room into the low doorway to the hidden room, the control of the player's point of view is momentarily taken over by a prechoreographed move, ducking inside and standing up again. Such moments of directorially guided nudges occur in places requiring difficult moves (the hatchway in Stoneship Age is also choreographed for the player), or are used to reposition the point of view for machine usage and animated sequences (this occurs when one approaches the machine inside the clock tower on Myst Island, the four-symbol pedestal and the lowering stairways in the Mechanical Age, various imagers, and other machinery throughout the game. Like shot selections in cinema, we are automatically given the best possible view, although we are usually responsible for finding it ourselves).

Passing through the sons' rooms we come to the central hall of the fortress, where a tubelike elevator awaits us at the end of a short hallway (in *realMYST*, one can walk all the way around the elevator, as one would expect). The red button lowers the stairway, where a machine is used to rotate the elevator above so that the player can enter it. In *realMYST*, just clicking on the handle causes the machine to slowly rotate, allowing the player to run up the stairs and watch as the elevator rotates into place, an extra animation not present in the earlier versions.

The tube elevator is then taken to the top floor, where there appears to be nothing to do, which usually means that an environmental puzzle has been nicely integrated into the design of the location. There is a tiny clue; a white triangle over the doorway pointing up, reminding the player to look up at the ceiling, where the tops of controls can be seen on top of the elevator shaft. In *realMYST*, with the player-controlled point of view, one is expected to look up, so the white triangle is no longer present. The way to access the controls is, of course, to send the elevator down by itself, by pressing the button and jumping out of the elevator before it goes down; a clever twist on elevator usage that one wishes were possible with the other elevators in the game (one is encouraged to go back and look for them).

Finally, the player is able to rotate the fortress and visit the small islands to gain the four symbols needed for the pedestal machine. (In the original Mac version 1.0 of the game, a bug prevents one from getting back to the small island where the pedestal is, which prevents the player from returning to Myst Island. This bug was corrected in all later versions of the game.) When the pedestal is reached, we are led into another underground room where a linking book awaits us with an ambience of theme music.

THE SELENITIC AGE

On the way to the spaceship, the player receives several views of the electrical cable, which is easy enough to follow to the underground generator room (the tips of the ladders are also visible, and will be useful if the player adds too much voltage). There the player is faced with 10 buttons each of which adds a certain amount of voltage. The note on the wall behind the player numbers the 10 switches, but the numbers are not helpful, for they do not correspond with the 10 different voltages of the buttons (the amounts are actually 1, 2, 5, 7, 8, 9, 10, 16, 19, and 22, which add to a total of 99). With these numbers, the player can generate any amount of power from 1 to 99,

except for settings of 4 and 95. The magic number the player needs at this point is 59, and there are twelve different combinations of buttons that yield that number:

$$\begin{aligned}
 59 &= 22 + 19 + 16 + 2 \\
 59 &= 22 + 19 + 10 + 8 \\
 59 &= 22 + 19 + 10 + 7 + 1 \\
 59 &= 22 + 19 + 10 + 5 + 2 + 1 \\
 59 &= 22 + 19 + 9 + 8 + 1 \\
 59 &= 22 + 19 + 9 + 7 + 2 \\
 59 &= 22 + 19 + 8 + 7 + 2 + 1 \\
 59 &= 22 + 16 + 10 + 9 + 2 \\
 59 &= 22 + 16 + 10 + 8 + 2 + 1 \\
 59 &= 22 + 16 + 9 + 7 + 5 \\
 59 &= 22 + 16 + 8 + 7 + 5 + 1 \\
 59 &= 22 + 10 + 9 + 8 + 7 + 2 + 1
 \end{aligned}$$

The choice of 59 makes the puzzle easier, as there are so many different ways that it can be obtained. Mathematically speaking, another nearby number like 61 (which can be formed in only eight ways) or 45 (which can be formed in seven ways) would have made the puzzle a bit more difficult.⁴

Once the correct voltage is entered, the player can open the spaceship. Whereas in the earlier versions of *Myst* both the door to the generator room and to the spaceship are clean, smooth, shiny metal, in *realMYST* both doors are stained and corroded, giving them a slightly more sinister feel. Inside the spaceship we find the organ to which the keyboard clue in the library book refers, and *realMYST* adds a metronome for ambient sound and movement, and shuts the spaceship door behind the player to reduce the roar of the ocean waves outside. Playing the organ is easy enough, but the notes must be transferred to the machine on the other side in order to start the spaceship. This proves one of the more difficult tasks in the game, as the other machine is three mouse-clicks away (the last click taking a bit longer as more of the game loads). Unless one has perfect pitch, counting the notes up from the bottom is one way of getting the sequence right, although the mouse must be moved carefully in tiny increments to do so, making the puzzle easy to figure out but a bit frustrating to maneuver.

When the correct sequence is entered, the linking book animation appears. Unlike the other linking book animations, there is simulated interference making it difficult to get a sense of the lay of the land (in *realMYST*

the movie is blown up larger, and appears even more fuzzy and blocky). A map of the Age appears in the book in the library, but does not show anything useful other than the coastline.

Once the spaceship arrives at the Age, the organ and the other machinery no longer function. In traveling to the other Ages, the linking book sends you to the Age by yourself, but here the entire spaceship seems to have traveled to the Age; or perhaps you do travel alone and you arrive in an identical duplicate of the spaceship on Myst Island, only one with non-functional machinery; the game is unclear as to which is the case. Once you leave the spaceship, the door closes and cannot be reopened from outside, one of the few irreversible things that can happen to the player (although one could return to Myst Island and then come back to the Selenitic Age, and it would be open again).

Next we leave the walkway and go onto the island, and the first place we encounter is a doorway that appears to be controlled by another sound machine similar to the one in the spaceship (one of the sounds is the tree elevator from Myst Island). The sequence is unknown, and this immediately gives us a goal to complete within the Age. Moving around the Age, we may come next to the oasis, finding what will be repeated at each location in the Age; a microphone recording some sound source, a dish antenna, and what appears to be an “on” button (at least it may appear to be so, once one has experienced the marker switches and the plaques around the fountain on Myst Island). There is also a red page here, which seems to indicate that there are no bedrooms on the island, as there were in the other Ages.

A sequence of other locations follows as we move along the island; a chasm, a ruined clock, a forest of large crystals, and finally a wind tunnel. At the ruined clock, we can turn to see in which direction the clock’s dish antenna is facing, and see the tower out on an island by itself, (the central island, if we have seen the map of the Age). The large crystals are apparently selenite, a variety of gypsum, and the source of the Age’s name. And finally, the wind tunnel hole has a ladder sticking out of it (reminiscent of fig. 4) down which we must next go. In case we wonder where it leads, an extra bit of stairway near the ladder points us directly at the antenna tower in the distance.

Descending into yet another underground passageway, the ladder ends and there appears to be nowhere to go until we turn around (a trick that will be used with an elevator in *Riven* to good effect). We also find a light

switch, which is optional since we can travel the passage in the dark as well. On the opposite end of the short passageway is another switch and ladder, and the same screens of graphics have been used to represent both (note the patterns of colored bricks in the background). The screens we see going up and down both ladders also have the same brick background, although the lighting changes as the ladder goes up. At the antenna tower, we find a device to align the antennas with sound sources, which we not only hear but also see on a small viewscreen. When we near the right location, the left or right button blinks for the final adjustments. The audiovisual redundancy of the clues here is such that one could solve the puzzle completely without the sounds, but as it turns out the sequence of sounds is the combination for the door we first encountered. The numbers representing the coordinates of the sounds, however, are unnecessary and are not needed anywhere else in the game.

The *realMYST* version of the Selenitic Age offers some nice touches and a few surprises. Here, too, the cycle of day and night changes the lighting and mood of the age. Ambient movement is added throughout the age, including the microphones and trees swaying in the wind (leaves also fall from the trees, though they disappear before reaching the ground). At night the chasm is lit by the dancing firelight from below, and smoke rises from the fire as well. The hands on the clock move, the hour hand moving all the way around, with the minute hand moving a little but remaining broken. The hours, however, do not correspond with the diurnal changes as one would expect; sunset can occur at nine o'clock, noon, three o'clock, or six o'clock, depending on the timing (but of course the clock is said to be broken). Oddly enough, the clock does not have the low jangling sound it does in the earlier versions of *Myst*, though the sound can be heard when the clock is viewed on the viewscreen in the antenna tower (the viewscreen graphics are also larger, sharper, and in color in *realMyst*). Finally, the best addition to the Age can be found down in the wind tunnel, where a flock of bats inhabits the passageway. The bats fly back and forth through the passageway, complete with sound effects as you pass them, making one wish there was more such fauna in the other Ages.

With the sound sequence, we can unlock the door and descend to the small fish-shaped car (reminiscent of the Osmobile) that takes us down into the underground maze. (In all versions of the game, you can travel the walkway all the way around the car, another nice touch.) The maze itself

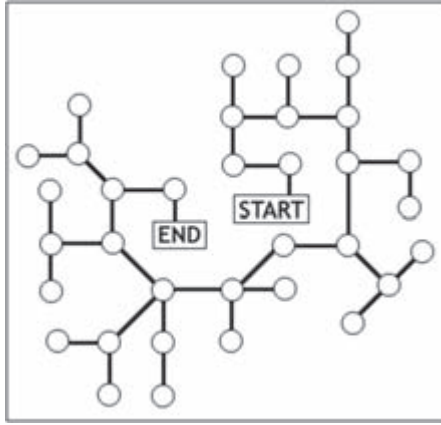


Fig. 15. Schematic diagram of the underground maze in the Selenitic Age

has 35 nodes between its start and end, which are laid out in a schematic diagram in figure 15. (Even *Myst Masterpiece Edition's* DigitalGuide, which gives the sequence of correct turns, does not provide a map of the maze.)

Some of the roads curve 90 degrees and some are S-shaped curves, but these have been simplified in the diagram, as have the roller-coaster hills added to the maze in *realMYST* and the overpasses (which do not appear in *realMYST*). The maze is similar in form to the maze of walkways in the Channelwood Age, as both are experienced in the first-person mode as though one were inside them. On paper, one solves a maze with the entire maze in view, and false paths and dead ends often must be long and involved in complex networks so that the correct path is difficult to find. In a first-person maze, by contrast, dead ends are less obvious, so they need not be as long. In addition, the turning and backtracking done by an individual inside a maze makes disorientation and unintentional backtracking much more likely. Thus even a simple maze design, if you cannot see the entire maze at once, can prove to be difficult and take a while to solve. From the start to end, the Selenitic Age's underground maze has nine points where the solver must choose between multiple pathways: seven with two paths, and two with three paths. A player who randomly chooses which path to take, then, has a 1 in 1,152 chance of choosing the entire correct path. Various sounds occur when the player arrives at a node (or when the red button is pressed) and these are intended as clues as to which way to turn, match-

ing the sounds associated with directions in the Mechanical Age's fortress rotation simulator, the only time clues from one Age are used in a puzzle in another Age. According to Richard Watson, this crossover was due to programming difficulties:

Actually the sounds were added to the fortress very near the end of the project so that you could tell if you'd stopped the fortress at the direction you wanted without walking all the way out of the building. Originally, it was much more important to get good with the simulator before trying to rotate the actual fortress.

In the Mac version, the simulator and the actual fortress worked identically and predictably. So you could practice with the simulator to learn the timing of the actual fortress and hit the direction you wanted almost every single time.

Unfortunately (or fortunately, depending on your perspective), the PC version that Brøderbund was working on was much less reliable. You could do the exact same actions on the fortress and sometimes it would rotate one position, sometimes two, sometimes three. It was far too frustrating to try to do it by timing. So the sounds from the Selenitic maze were added so you could tell which direction the fortress stopped at and try again if it wasn't the direction you wanted.

(This is the reason that the Mac v1.0 fortress has the problem you mentioned earlier. One little typo when adding these sounds to the fortress at the last minute . . .)⁵

Although players could use the fortress rotation simulator to learn which sounds indicated which direction, the sounds could be learned strictly from the Selenitic Age maze itself:

Actually, the maze itself was designed to teach you the sounds as you went, once you realized that the sounds were telling you where to go next. The first node (start) only has one exit, so the "ding" sound must mean "north." The second node only has two exits, west and back the way you came (which you can eliminate if you know the sounds are guiding you through the maze), so the "pwiddt" sound must mean "west."

The third node only has one "forward" exit, reinforcing that "ding" means "north." The fourth node goes north and east so this new sound "Pssshhh" must be "east" since you already know the sound for north.

The fifth node reinforces the east sound. The sixth teaches that “bonk” means “south.” The seventh reinforces south, and the eighth reinforces west. Once those are given and reinforced, we start with the combinations of sounds. The first one in the ninth node is given as the only other way out of the node is the way you came and a direction you already know the sound for. And so on.⁶

One could learn the sounds, but as it turns out, there is a simple rule that will guide the player on the correct path all the way to the end: whenever you arrive at a choice of paths, choose the one the farthest over on the right-hand side (the same rule used in the Channelwood Age maze of huts).

In addition to the differences noted above, *realMYST* features a bigger window by which to see the maze, and new animations. The end destination is also more detailed, with an extra room where the car arrives and a door to the room where the Myst Island linking book resides.

DUNNY (D'NI)

After all the Ages are visited, and enough red or blue pages are collected, either Sirrus or Achenar reveals the number of the pattern to be used on the fireplace grid. Thus the player comes to decide between the four endings of *Myst*; to free Sirrus from the red book, free Achenar from the blue book, or visit Atrus in Dunny with the white page or without the white page. The careful player who wants to hear all of Sirrus's and Achenar's messages will have to make two trips to every age to gather both sets of pages, and then consider the evidence against each of them. From their manner and the objects in their rooms, both appear to be untrustworthy, and the only difference between them is that Sirrus appears to be sane while Achenar does not. Atrus's speech from the green book in the fireplace seems to confirm this, and there is really nothing in the game to cast doubt on his character. The choice, then, seems to be an easy one. Atrus also warns the player not to enter without the white page, so players are most likely to choose the correct or happy ending the first time around, if they are playing seriously. Giving players reason to doubt Atrus, or reasons to believe that Sirrus and Achenar were not as evil as they appeared, might have made for a more interesting endgame. Clues leading to the truth could have been scattered throughout the Ages, with their full meaning only clear once the entire context was revealed and understood. There are, of course, some clues, like the

flag of the Black Ship, the notes, and so forth, but nothing that contradicts or gives a twist to what the story appears to be as it is unraveled. Still, there is enough present to make the ending interesting and entertaining.

If the player does not end up trapped in the red or blue books, a trip to Dunny is inevitable. Dunny, or D’ni, as it is now called, is the culture and people from which the art of writing linking books comes. Although it is called “Dunny Age” in the program file names on the CD-ROM (as though it were originally intended to be one of the Ages), it turns out to not be an Age at all, but a part of the large underground cavern on earth where the D’ni people live (the name also doubles as the name of the location, at least in *Myst*, which does not refer to the culture or people). This is not evident in *Myst* itself, but rather in the novels that followed and provided some backstory for the events and the characters of the game. As for the change of the name from “Dunny” to “D’ni,” Cyan programmer and D’ni historian Richard A. Watson explains,

The D’ni language has a completely different alphabet, so translating a word from D’ni to English requires transliteration, which is very subjective to say the least.

The example I used to give when this question used to be asked more often was the spelling of Mohmmar Qadaffi’s name. At the time, his name was in the news frequently, but everyone spelled it differently: Qaddafi, Qadaffi, Khadafy, Qadhafi, and at least 28 other spellings (not an exaggeration). . . .

“Dunny” is a good transliteration because it is easy for English speakers to at least get close to how the word should be pronounced. “D’ni” is a more accurate transliteration of the D’ni characters for the word, but most people don’t know how to pronounce it (most people who haven’t previously seen it spelled as “dunny” tend to pronounce it like “deny”). For *Myst*, we went with what would get people to pronounce it right. Later, (when making *The Book of Atrus*) we decided to go with the more accurate spelling.

The prison in D’ni shown at the end of *Myst* was always known to be a small room on an island in a vast underground cavern on Earth. That wasn’t changed for *Riven*.⁷

The player arrives in Dunny facing a crumbled ruin in the corner (the rockfall) in the early versions of *Myst*, or facing Atrus (as one would expect from the image in the linking book) in *realMYST*. The player can then

explore the single underground chamber before approaching Atrus, who sits writing at his desk. (In *realMYST*, you can even move from one side of Atrus to another, and see the video loops of him writing from slightly different perspectives.) Once the player approaches Atrus, he or she is greeted and is asked for the white page, and whether or not the player has it determines which ending is chosen. Without the page, the player is berated and stuck in Dunny with Atrus, but with the page, the story continues as Atrus leaves to remove the red and blue books, and after returning, describes the situation that sets up *Riven*; that his wife Catherine is being held by his father, Gehn, in the Age of Riven.

We also get to see what happens to a person who links to an Age and returns from a third-person perspective, although in *realMYST* the effect differs somewhat from the earlier versions of *Myst*. In the former, Atrus grows brighter and fades away, and returns in a similar fashion, while in the latter, his form distorts as he departs and returns (the first *Myst* novel describes a link stating: “he felt himself being sucked into the page”).⁸ One can ponder further about the “rules” that govern the linking books. For example, when Atrus links, his clothes go with him, and in the *Myst* novels characters take supplies and other things along with them. If a player was wearing a long robe, one would suppose the entire robe would be transported with the player. But what if the player is chained to a larger object, or is holding onto something large? What are the limits to the transporting of objects around the player or carried by the player?⁹ While the way linking books function is discussed more in the *Myst* novels, some questions regarding their operation still remain. (Similar questions could be asked of other such devices, such as Tolkien’s Ring, which makes its wearer [and the wearer’s clothing] invisible.)

Finally, when Atrus is done speaking, the remaining option is to return to Myst Island, but once the player returns, there is nothing left to do, and no one to interact with. The game does not end, resulting in a weird, lonely feeling of being in an empty world with nothing to do, making the ending strangely anticlimactic and without closure. This, however, is not the case in *realMYST*, which has the pleasant surprise of an additional Age.

THE RIME AGE

In *realMYST*, the action advances a little farther with the addition of the Rime Age, added, no doubt, to convince fans who had the first two ver-

sions of *Myst* that there was a reason to buy a third. The presence of the Rime Age, which is announced on the game's box and CD-ROM case, is played down within the game itself; the Age has a new book on the shelf that players can read, and the book reveals the hidden compartment behind the panel in the forechamber, but no way to open it, and nothing more can be done until after the visit to Dunny. Upon returning to *Myst* Island, the player finds the Rime Age book on the floor in the library (which is easily missed, since one does not typically look down at the floor), and it reveals a button that opens the panel and the number 2735, both written in blue ink, ostensibly by Atrus when he returned to the library. The Rime Age, then, is more of the "reward" (the use of the library books) promised by Atrus. The area behind the forechamber's panel contains a button that opens a hidden door in the walkway to the spaceship, and beyond the hidden door is a chamber where another combinatorial machine lies in wait. When 2735 is entered, the machine is drawn up into the ceiling, leaving us with nothing at all to do in the chamber; a startling appearance of another environmental puzzle to solve. Eventually the player may decide to check the Rime Age book again, and in returning to the library, finds the center of the library floor has risen up to reveal a compartment where a linking book resides. On further reflection, the clue was there all along; the rising machine was spatially positioned beneath the center of the library floor.

It is always night in the Rime Age, and later in the exploration of the Age we will realize why. Snowflakes twirl down from the sky above, and the Age has a remote and lonely feel to it. The only place we can go is a small hut on the island, and inside is a gas stove, what appears to be a locked door, and a *Myst* linking book in plain view (which feels strange, considering how carefully the books were hidden in the other Ages; but there is no need for a puzzle since there is no reason to return to *Myst* Island). The only object that does anything is the valve on the gas pipe outside the hut. Once this is opened, the stove can be lit. And then it seems that nothing more can be done.

This is one of the best environmental puzzles in the game; and one that requires us to imagine what we would do if we were really there. The answer is to close the door and then do nothing but wait; perhaps the most counterintuitive thing the player could be asked to do. The heat warms the room and melts the ice coating the door (the "rime" of the Age, in fact), which can now be used. (I thought of another alternative and had to try it; to turn the gas on without turning on the stove, and then close the door so the gas

builds up in the room. I was hoping that lighting the stove with the room full of gas would result in an explosion, maybe even the player's death, but nothing happened.)

The door leads down a hall with vapors blowing across the floor, a fine effect. An elevator at the end of the hallway takes the player up to a balcony, where controls allow the player to make huge electrical lightning bolts in three colors, which result in colored aurora borealis in the sky, a very pretty effect (just as it was described in the Rime Age book in the library, and the reason for perpetual night).

Turn the elevator around, open the door, and there's a small room with a writing desk, and another Rime Age journal, describing more work with the crystals that allow one to view another Age, and Catherine's interest in them. If the elevator, now turned around, is taken down again, another vapor-laden hallway leads to the last room of the Age, in which a viewing machine requiring a five-crystal combination awaits us. A note from Catherine gives the combination, and we must figure out how to get the crystals to change shape and color, but it is not a difficult puzzle. Finally, when the combination is entered, a view of Riven appears, suggesting that Catherine may have linked there accidentally. So *realMYST* ends, then, by linking the *Myst* storyline more firmly to that of its sequel, *Riven*. There is still no definite ending where the game ends and the credits appear; the player is still allowed to wander and even return to Myst Island, but at least now there is a sense of closure and anticipation of the next chapter in the story. Before turning to *Riven*, however, there are some other *Myst* products we might consider.

BEYOND THE GAME:
THE OTHER MYST PRODUCTS



Looking beyond *Myst* itself, we can first note what came with it; all three versions of *Myst* had different extras included on their CD-ROMs. The original version of *Myst* contains a short documentary, *The Making of Myst*, describing the stages of the game's creation. Short documentaries on the making of *Riven* and the making of *Myst III: Exile* would later be made, but would appear separately on their own CD-ROMs. The inclusion of a short documentary with *Myst* was made possible by the CD-ROM's increased storage capacity, as well as the fact that *Myst*, despite its size, still did not fill the entire disc (*The Making of Myst* takes up 70.2 Mb, a substantial amount of the 523.1 Mb used on the disc).¹ *Myst Masterpiece Edition* uses 570.1 megabytes, and includes "medium" and "large" versions of a trailer for *Myst III: Exile* (at 9.3 Mb and 23.6 Mb, respectively). At 659 megabytes, the *realMYST* CD-ROM is quite full, and the only extra feature on it is a 444-kilobyte file named "cyanegg.avi" (since it is an "Easter Egg" or hidden feature) found on the disc in the "maps" folder in the "scn" folder in the "Game Data" folder. The movie file is a set of 32 still images, which are mostly playful photos of the *realMYST* crew and their children.

By contrast, *Riven* came on five CD-ROMs, and had only one extra feature, which was not even related to the game: a *Legacy of Time* demo (a 138.4 Mb folder on disc 4) that was essentially an ad for another game. Whereas players could look into the folders on the original *Myst* disc, read the game's HyperCard stacks by opening them with Microsoft Word, and even play QuickTime movies from the game just by opening their files, *Riven* protected its content against such snooping by combining its data into giant

files (with more abstract names) that could not be opened directly; for example, disc 2 contains a 628-megabyte file named “t_Data.MHK.” (There are, however, programs available on the Internet that can read and play the movies in these files. Some websites also feature saved games that one can download, which are saved one click before various events in the game.)

Encouraged first by the success of *Myst* (1993) and later *Riven: The Sequel to Myst* (1997), a number of other *Myst*-related products appeared in the years following their releases, including the three *Myst* novels, *Myst: The Book of Atrus* (1995), *Myst: The Book of Ti’ana* (1996), *Myst: The Book of D’ni* (1997); the audio CDs *Myst: The Soundtrack* (1998) and *Riven: The Soundtrack* (1998); a board game, *Myst: The Puzzling New Board Game Adventure* (1998); and various other merchandise sold on the Cyan website. While a detailed synopsis and critique of the novels and soundtracks is beyond the scope of this book, it is useful to look at their content and how they relate to the games and add to the world of the D’ni.

In the world of publishing, there are hundreds of novels (and worse, novelizations) written to cash in on works in other media, such as films, television programs, and video games. That being the case, I was initially doubtful about the *Myst* novels. The novels all had “with David Wingrove” listed on the cover, suggesting that storylines by Rand and Robyn Miller were fleshed out by someone else. The text on the back of all three books invites us to take a step “into the fictional legend of *Myst*” as though someone felt it necessary to point out that the novels were fiction. Upon reading *Myst: the Book of Atrus* (billed on its cover as “The Fascinating Prequel to the CD-ROM Phenomenon”), however, I was pleasantly surprised. The book turned out to be well written and a good read overall, and it stood on its own apart from the game. Like many stories that introduce new cultures, we gradually learn about the new culture through the eyes of the main character as he is taught and has his (and our) questions answered by other knowledgeable characters. In this case, it is the young Atrus who learns about D’ni culture from his grandmother Anna, who has raised him after he was given up by his father, Gehn (the scene of Gehn’s rejection of Atrus right after his birth serves as the book’s prologue). Later in the story Gehn returns and, taking over Anna’s role as mentor, takes Atrus with him into the now-abandoned underground realm of the D’ni, where he learns more about the culture and sees firsthand what remains of it. Gehn has been trying to revive D’ni by the writing of new Ages, but without a complete understanding of how the books work, and all for his own glory. Atrus comes to realize this and

tries to escape, only to be imprisoned by Gehn in a room in K'veer, which is the very room referred to as Dunny (D'ni) in *Myst*. Atrus is left with a linking book to Riven, and it is on Riven that he meets Katran (Catherine), Gehn's student whom he plans to have as his bride. But Catherine loves Atrus instead, and writes *Myst* Island for them as a refuge. By the end of the story, everything has been set up for *Myst* to pick up where the book ended.

The second novel, *Myst: The Book of Ti'ana*, is also well written, and has a good amount of invention in the creation of its world. The book is set even farther back in time, and tells the story of the fall of the D'ni empire, the same story that Gehn tells Atrus on pages 177–82 of *Myst: The Book of Atrus*. The book goes into even greater detail about how the D'ni lived, mined, and built, and what their civilization was like, as well as its demise. Finally, the book's epilogue has Anna and Gehn moving to the cleft where *Myst: The Book of Atrus* begins. The events of the book form the backdrop and history for the events of *Myst* and *Riven* and the D'ni culture, their underground city, and Art of Writing, and the book can also stand on its own apart from both the game and the first *Myst* novel. The novel also features a colored map inside its front cover, which shows the tunnels from the cleft to the underground city, both in a top view and a side-view elevation.

The third novel, *Myst: The Book of D'ni*, begins some time after the other two novels. The underground kingdom of the D'ni has lain in ruin for forty years. Atrus and others link into the prison room in K'veer and drill their way out, and then proceed to explore the ruins of the city. Atrus plans to find as many books as possible and gather the survivors living in the various Ages, with the hope of having them return to help rebuild D'ni. We learn a bit more about the D'ni civilization, along with the newer characters, and there are a few interesting new details, like the environmental verification suits worn by members of the Maintainer's Guild when they go in to check an Age. But the book falls short of the first two *Myst* books, partly because the newer characters, particularly the always-enthusiastic students Marrim, Irras, and Carrad, lack the headstrong independent spirit found in Atrus, Catherine, Anna, Gehn, and Veovis (a pivotal character introduced in *Myst: The Book of Ti'ana*). *Myst: The Book of D'ni* lacks the conflict between the characters that made the other two novels interesting and gave them their emotional range and urgency. Here the characters explore the ruins and Ages together, harmoniously and without even a sense of time pressure to hurry them onward, resulting in a story that is a bit too relaxed compared to the other two.

A little less than halfway into the book, beginning on page 183, the story shifts as Atrus and his group of explorers link to the Age of Terahnee. Almost all of the rest of the book is spent there, and the rebuilding of D'ni is left behind, with the story going off on a tangent. The land of Terahnee appears to be a utopia lacking conflict, until it is discovered to have an underclass of slaves, the “relyimah” or “unseen,” who live underground and serve the rich landowners and their servants (the P'arli) who live in giant stone mansions above ground; just one of many such stories of vertically split societies divided by class that undergo revolution that one finds in science fiction all the way back to such works as the film *Metropolis* (1927) or H. G. Wells's book *The Time Machine* (1895). Predictably, Atrus and his group end up pointing out the injustice; later a revolution occurs, a plague helps to reduce the numbers, and soon a new era of self-governance begins for the once-oppressed people of the Age, thanks in part to Atrus and the others. The theme of an outsider who steps into a situation where a people are being oppressed and helps to free them, ending the reign of the oppressors, must be a favorite of the Miller brothers, as it appears in each of the three *Myst* novels and in *Riven* as well.

The second half of the book seems to have had less time spent on its development, not only in the predictable nature of its story of revolution, but even in the prose itself. Too often the book tries to produce a sense of awe without putting in the creative and descriptive work required to produce it. All too frequently we are told that things are “vast,” “astonishing,” or “massive” (by far the most overused word in the book), rather than given detailed descriptions that might produce such reactions through showing instead of telling. According to Richard Watson, part of the reason for this hurried writing was deadlines. In an e-mail to the “*Riven* Spoiler Lyst” he writes, “It is very unfortunate for *The Book of D'ni* that the deadline for the book coincided with the deadline for *Riven*. The whole second half of the book didn't get anywhere near the attention we would have liked to have given it.”² At the end, however, there is mention of Atrus and Catherine living on Tomahna with their new daughter Yeesha, setting up the continuation of the story in *Myst III: Exile*.

In 1998, a year after the last *Myst* novel, the *Myst* and *Riven* soundtracks appeared. Whereas *The Manhole* and *Cosmic Osmo* contained their own soundtracks (the CD-ROM had music tracks that could be played on an audio CD player), the soundtracks for *Myst* and *Riven* were released as audio CDs through Virgin Records (the *Myst* soundtrack was originally

released in 1995 and distributed by Cyan). Both discs consisted of ambient music from the games, composed and produced by Robyn Miller, along with a few extra tracks not used in the games. The CDs hold up well on their own, especially the *Riven* soundtrack, which has the most depth and subtlety of the two, with haunting ambiances tinged with somber melancholy. Both CDs also include a booklet with images from the games, and in the case of *Riven*, “recently recovered D’ni archeological information available only in this CD” which consists of some quotes of Gehn’s regarding some of the objects in his 233rd Age.

The year 1998 also saw the release of *Myst: The Puzzling New Board Game Adventure* from University Games. The board game uses images from *Myst* on its box, game board, and cards, but its premise, rules, and game events have little or nothing to do with the *Myst* storyline (which indeed makes the appearance of this “new board game” something we might find “puzzling”). While some elements of the game’s design are good, like the idea of building the game board out of puzzle pieces, the game seems more like a good first draft of a game rather than a polished, finished product. More design development would have made it possible to incorporate and make better use of more elements from *Myst*. For example, the linking book cards can only be used once per game, for one jump from one point on *Myst* Island to another (which runs counter to how the linking books are supposed to work; according to the novels, you cannot link from one place to another within the same Age), but the idea of linking books and the descriptive books for Ages in *Myst* is a rich one that could be turned into a much more interesting game. Likewise, Atrus, Sirrus, and Achenar could personify three opposing players all competing for the same things. The game is rather plain as it is, and could have been much better had it involved more of the ideas found in *Myst*.

Other *Myst*-related merchandise appeared on the “Goods” section of the Cyan Worlds website: various versions of the game software, the *Myst* novels, Richard Kadrey’s coffee table book *From Myst to Riven: The Creations and Inspirations* (discussed in the next section), the misnamed Prima and Bradygames Strategy Guides (*Myst* and *Riven* are *not* strategy games), and an *Uru* thermos and water bottle. Other *Myst* and *Riven* merchandise, like T-shirts and hats, was once on the website following the release of the games, but no longer appears. Overall, Cyan World’s understated approach to merchandising is a wise one that helps to keep the focus on the games themselves.

Around the same time *Riven* was released in 1997, Richard Kadrey's book *From Myst to Riven: The Creations and Inspirations* came out, chronicling the making of the games, as well as the growth of Cyan and the adjustments that had to be made to move from *Myst* to the much larger world of *Riven*. It covers the shift from the Cyan employees working in a garage to their own office building in Mead, the changeover from Macintoshes running Strata Studio Pro to Silicon Graphics machines running SoftImage, the changes in scope and scale in the computer models, design process, and game storyline with more endings and possibilities, and the changing style of the look and design both after *Myst* and after the arrival of Richard Vander Wende, who would greatly influence the processes involved in the development of *Riven*.

The book begins with the making of *Myst*, with high-resolution views of the Ages, including some that do not appear in the game. Also included are some of the legal pad sketches of early ideas for the Ages, revealing their development. There is more information on the D'ni culture and the D'ni language and writing, and a large two-page version of the map found in *Myst: The Book of Ti'ana*. Likewise, there are many sketches, early designs, wireframe renderings, and images from *Riven* and its development, as well as pictures from the shooting of the live-action scenes. The book is quite well rounded in covering every aspect of the process, and showing the different directions *Riven* could have gone (for example, the development team briefly wondered what it would have been like to have Catherine turn out to be the villain), and how the game's shape and the ideas behind it changed over time. The development of the story, the design process, and their interconnection are also discussed (two flow charts showing early versions of the branching storylines appear on page 36, and although they are extremely small, they can be read with a magnifying glass). Not only would *Riven's* puzzles be more integrated into the storyline, but the storyline itself would be more detailed, and every detail in the design, down to the five-sided heads of bolts, the five-lobed fruit, and the misspelled word on the spelling test on the pad in the schoolroom, would reflect the characters and storyline's situations, often in subtle ways that would reward the careful observer. Most of all, *Riven* would extend and greatly enlarge the world of the D'ni begun with *Myst*, a process that the master-builder of imaginary worlds, J. R. R. Tolkien, called "subcreation."

FROM *MYST* TO *RIVEN*:
SUBCREATION AND EXPANSION



In both Kadrey's *From Myst to Riven* book and an interview in *Wired* magazine, the Miller brothers make the analogy that *Myst* is to *Riven* what Tolkien's *The Hobbit* was to *The Lord of the Rings*. Likewise, the idea of Descriptive Books and linking books that link to alternate worlds in the Terokh Jeruth, the "great tree of possibility," is analogous to the process of subcreation (since they are familiar with Tolkien's work, it is quite possible that the Miller brothers are also aware of Tolkien's ideas of subcreation).

Subcreation is Tolkien's term for the production of an imaginary world. As both a Roman Catholic whose faith provided a background and a context for his work, as well as a philologist for whom language and verbal precision was important, Tolkien, while discussing authorial invention in "On Fairy-Stories," wanted to distinguish between the kind of creation done by God and the kind done by human beings. Being created in the image of God, human beings also have a desire to create, but they cannot create *ex nihilo*, from nothing, the way that God can. Instead, they are limited to using the preexisting concepts found in God's creation, and coming up with new combinations of them that explore the realm of possibilities, many of which do not exist. Tolkien notes that the separation of the adjective from the noun is one of the ways this recombining becomes possible:

When we can take green from grass, blue from heaven, and red from blood, we have already an enchanter's power . . . We may put a deadly green on a man's face and produce a horror; we may make the rare and terrible blue moon to shine; or we may cause woods to spring with silver leaves and rams to wear fleeces of gold, and put hot fire into the belly of

the cold worm. But in such “fantasy” as it is called, new form is made . . . Man becomes a sub-creator.¹

Thus the term *subcreator* means one who “creates under” the Creator and within the bounds and possibilities inherent in that Creation which He has made. As Christians, the Miller brothers likewise did not want to claim that the D’ni were creating *ex nihilo*, like God, and so as the D’ni mythology developed, instead of creating the worlds written in them, the Descriptive Books and linking books are said to connect to preexisting worlds, which exist before the D’ni books describe them and link to them. This was not originally the case, however, but was changed as the world of the D’ni and its mythology developed. The “great tree of possibility” of which they are a part is the same realm of possibilities that Tolkien describes, also using the concepts of language and writing to reach them.

To explain the change from “created worlds” to “preexisting worlds” diegetically, it is said that Gehn believed he was actually creating worlds (especially because he was able to develop his test Ages, books that linked to preexisting Ages that matched his descriptions), but that later on, after he had begun learning the Art of writing Ages, Atrus discovered that this was not the case (the revelation comes on pages 203–4 of paperback edition of *The Book of Atrus*). These changes, to bring *Myst*’s mythology more in line with Christian theology, are similar to the subtle changes Tolkien made to his world to bring it more in line with Christian theology.

Thus another important analogy arises here, in which we can compare the D’ni writers to the Miller brothers themselves. Both are the authors of the worlds or “Ages” found in *Myst* and *Riven*, and both are creating the media that can “transport” an audience into those worlds, either by the D’ni Descriptive Books and linking books or the Millers’ CD-ROMs and novels (the placing of one’s hand on a linking book image is analogous to the CD-ROM interface, which involves pointing and clicking on an image [and with a cursor shaped like a hand]). The CD-ROMs also contain the very precise descriptions, written in computer code, that give life to all the objects in the worlds they contain. Like the D’ni language, the computer code is unlike spoken language, extremely precise in its phrasing, and must be free of contradictions in order to avoid strange results or unstable worlds. The Age of Riven itself, then, is the point where these two types of writing overlap, since it is the product of both, one in the Primary World and one in the secondary world. Atrus, Gehn, Catherine, and the D’ni are

all subcreated subcreators, giving the world of the D'ni a nice self-reflexivity that allows it to discuss and comment on the very process that brought it into being. The expansion of the world of the D'ni, its roots and branches into the past and future, found in *Riven* and the various other games, novels, and so forth, is also the expansion of the underlying ideas and themes, as well as the storylines.

Riven is the story of Gehn's desire to be a god, lording it over the indigent people of the age, as he tries to reestablish the D'ni guilds and empire, of which he will be the ruler. His hold on the people of Riven is one based on fear, not on love, and some of the villagers have rebelled against Gehn, becoming the Black Moiety,² with their own Age, Tay, written for them by Catherine. Whereas in *Myst* the greed of SIRRUS and Achenar was for material wealth culled from the various Ages, Gehn's greed goes beyond that to desiring to be lord, owner, and (he thinks) author of the Ages. The D'ni books become a source of power for Gehn, whereas in *Myst* they were primarily just a means of transportation, a kind of portable portal. Imaging technology is another tool used for intimidation; Achenar's temple in the Channelwood Age, with its holographic imager, is just a smaller version of Gehn's temple and imager, which also uses the wahrk statuary and imagery as a means of scaring the villagers. Whereas the design of the bedrooms of SIRRUS and Achenar revealed something about them, almost everything on Riven gives some insight into Gehn's character. As an expansion of the Miller brothers' subcreated world, *Riven* uses every detail to add to the world and enhance the player's experience.³

Characters are also more developed in *Riven*. This is due to the backstory provided by the novels, as well as the journals and the details in the game itself. In *Myst* we learn about SIRRUS and Achenar from the red and blue books, their bedrooms and notes, and what Atrus has to say about them, but in *Riven* we learn much more about Gehn through similar means. His buildings, the temple, throne room, schoolroom, Gate Room, workroom, office, and bedroom, all convey insight into Gehn's character. While most of it suggests a dark megalomania, Gehn's bedroom, the most private room that the player gains access to late in the game, conveys a more vulnerable, emotional side. Here we find images of his wife and father lovingly displayed, and a moving image sequence of his wife preserved on an imager. In his journal we find, "It's late and I cannot sleep. I've lost so much in my life. My people, my father, my son, and you, my wife—Keta, you were the only true kindness I have ever known. Watching you flicker in the imager . . .

I sometimes wonder if you were real. If I could restore your life with my pen, I would do so in an instant, and leave the rest of the world to their own wretched fate.” As Stewart Bradford has pointed out, the handwriting is also unusually shaky, revealing an emotional state, and a tiny round water stain on the page appears to be a tear.⁴ Looking at Gehn’s journals, Gehn is evidently losing his grasp of English or is a bad speller; in the workroom journal he uses “discreet” where he means *discrete*, and in his diary he has “whark” instead of *wahrk*, and “who’s ignorance” instead of *whose ignorance*.

Just as in *Myst*, a father-son relationship is the source of the conflict in *Riven*. Gehn and Atrus, as father and son, have much in common; both desire to restore D’ni, to marry Catherine, and to save Riven from its inevitable demise and collapse. It is in their motives and methods that they differ. Both fail in their attempts, although Atrus does marry Catherine, and Gehn’s mock guilds get far enough that Catherine is able to write an Age. Interestingly, it does at first appear that Atrus is harsher with his sons than Gehn is with him; while Atrus burns the books that are the one-man prisons containing his sons at the end of *Myst*, Gehn does not kill Atrus but imprisons him in the room below K’veer, and even gives him access to Riven. To be fair, it is later revealed that Atrus did not kill his sons, as they return in *Myst IV: Revelation*, and Gehn does kill Atrus (or at least shoots him) in some of the bad endings of *Riven*. Gehn is pride-filled, arrogant, and self-centered, while Atrus is humble and more concerned with doing what is right or best for others. Atrus, however, is not without flaws, which are alluded to on the *Myst IV: Revelation* website.⁵ On one webpage a picture of Atrus appears and in voice-over he refers to what he did to his sons: “I do not discuss my own actions that day or the rage that I felt when I burned the two linking books that ensnared them. Some people believe my sons died in those fires, but the truth is, they did not.” It could be, too, that a loophole has allowed the story of Sirrus and Achenar to continue, even though *Myst* seemed to have closed off these possibilities.

The expansion of the Miller brothers’ subcreated world also takes place graphically. *Riven* had more images (4,000, compared to *Myst*’s 2,500, according to Cyan), and higher resolution imagery (608 by 392 pixels, compared to 544 by 332 pixels for the original version of *Myst*, and oddly enough, 544 by 333 pixels for *Myst Masterpiece Edition*). Like the later versions of *Myst*, *Riven* also had greater color depth, and with more color gradations (along with higher spatial resolution) greater visual depth on the z-axis could be achieved.



Fig. 16. Staging in depth in *Riven*. Note the three maglev tramlines at varying distances.

And *Riven*'s imagery does contain staging in depth, even more than *Myst*'s imagery did. In the view from Temple Island in figure 16, for example, one can see Jungle Island in the distance, desaturated to give a feeling of aerial perspective. Three maglev tramlines can be seen at varying distances, the farthest away one visible only as a series of support towers rising from the water. Although *Myst* featured staging in depth (for example, the library and tower can be seen through the trees from the far side of the island by the clock tower), distances were limited by the fact that each island is in a separate Age. Views in *Riven* often include one or more of the other islands in the background, requiring greater depth and more render time for views (fortunately, the imagery is all pre-rendered) due to more computer modeling within each view (one of several reasons why we probably will never get *realRIVEN*). The effect on gameplay is greater detail, depth, and sense of interconnectedness in the game's world, and a more immersive experience.

THE WORLD OF *RIVEN*



Like *Myst*, the box for *Riven* shows sample images from the game, and text that extols the game's advances (except for the "Collector's Edition" box for *Riven*, which has a wood grain background and a primitive-style drawing of Atrus and the book falling). The main image on the cover, however, is from the game but curiously not from the Age of Riven itself; it is the rebel hive from the Age of Tay, which the player will not see until well into the game. Opening the box, one finds the album of five CDs that make up the game (except in the case of the DVD version, which is all on a single disc). Each CD has a jacket with what looks like a stained glass window of an event involving Gehn and his powers, which we later learn were created by Gehn to intimidate the villagers (we will see the images again inside the beetles in the Gate Room). The instruction booklet for *Riven*, like *Myst*'s booklet, does not reveal much of the game at all, though it does remind the player of where *Myst* left off, has details on installation and troubleshooting, four pages of credits (which also appear at the end of the game), and, at the beginning of the book, a "Please do not make illegal copies of this software" page. Little icons of animals are also present in the book (the ones that appear on the stones in the Moiety Cave), which already suggest that we will encounter more life on *Riven* than in the relatively lonely world of *Myst*.¹

Entering the game, after the studio logos (both of which are more grand in scale than the ones preceding *Myst*), we encounter the pretitle sequence. Atrus is at his desk in the K'veer prison room in D'ni, where we last saw him in *Myst*. He updates us on the story, giving us a journal (which contains more exposition on events leading up to the present situation), and a one-man prison book that appears to be a linking book back to D'ni, which the player is told to use to capture Gehn. Atrus then holds the linking book

for us until the image within it fills the screen, and then the title “Riven” zooms toward us with enticing title music. Arriving on Riven, the animation continues as the bars of a cage close into place in front of us, a guard takes the prison book, a Moiety scout shoots a dart at the guard and takes the book, frees us from the cage, and disappears. We are left to explore the world of Riven.

A complete description of the backstory requires the reading of Atrus’s journal, Catherine’s journal, and Gehn’s two journals, found in his workroom and bedroom, and is too detailed to be recounted here.² Unlike in *Myst*, the *Riven* player clearly has two objectives: capture Gehn and rescue Catherine. From the beginning of the game, the story, in which the player takes part, runs roughly as follows: eventually the player will find the way to Tay, the rebel Age that Catherine has written for the Moiety, where the prison book will be returned with a note and journal from Catherine. With the prison book the player will have to find Gehn, who claims to have repented (thus setting up a situation similar to *Myst*, in which the player must decide whom to believe, although there is no other evidence in Gehn’s favor). Gehn takes the prison book, which he believes may be a linking book back to D’ni, and asks the player to link through first, producing the best moment of decision in the game, and the only one with something of a time pressure. Remembering how the prison books worked in *Myst* is helpful here; in the earlier game the player’s entering of a prison book could free the person captured within it. The player, then, must enter the book, and wait for Gehn to follow, which frees the player. Once Gehn is captured, the player then gains access to the island where Catherine is being held prisoner. Once she is rescued, the player need only signal Atrus by opening the star fissure, and the game ends happily. (Basically, you get to the happy ending by doing exactly what Atrus asked you to do.)

Of course every step of the way is much more difficult than it sounds; learning the lay of the land, how to get around, how things work, and how to power and turn on machinery is where the majority of the challenges of the game are to be found. The islands and their machinery are all interconnected, so solving the puzzles is more complicated than in *Myst*, where every Age contains all the clues for the puzzles of that Age (with the exception of the sounds indicating direction used in both the Mechanical and Selenitic Ages). But this is where *Riven* excels in its design; and furthermore, almost every puzzle is integrated into the game’s world and storyline in a plausible manner (some of their purposes become clearer after reading the

journals). The clues for the major puzzles of the game are so distributed throughout the islands that one has to explore much of the islands before one is able to unravel them. Turning on the power to the rotating domes, accessing the linking book to Tay, the opening of the star fissure, and other necessary activities all involve visits to multiple islands and the reading of the journals. Some of these interconnections will be examined in the sections to come.

Riven also has 10 different endings. First, there is the happy ending mentioned above; trap Gehn, rescue Catherine, signal Atrus, and then everyone leaves Riven before it collapses (somehow, in the short time it takes you to link back to Temple Island and open the star fissure, Catherine, who had only a short head start, has ensured that all the villagers are able to get off Riven safely before its collapse). Next, there are two imperfect endings where you still get to leave Riven alive, but which are not as good as the happy ending. In one, you trap Gehn but do not rescue Catherine, then signal Atrus and leave Riven. As you fall, Atrus bemoans the loss of Catherine, and the ending is a sad one. An even more imperfect ending is one in which you open the star fissure and jump out at the beginning of the game. As Riven collapses (the same animation is used for all the “collapse” endings) the scene cuts to the jump into the fissure just as the sound of Atrus linking onto Riven begins, and the player departs without seeing anyone. Aside from performing a brute force search for the combination, this ending can only be seen by someone already familiar with *Riven*, since it requires a player to save a game before getting Catherine’s journal, to get the journal and find the fissure code within it, to know the D’ni numbering system in which the code appears, and then to restart the game in order to leave by the fissure without the prison book. The inclusion of this ending shows the Cyan team’s careful consideration of possibilities and outcomes in the game.

In another three endings, the game ends with the player trapped in the prison book. If you trap yourself in Tay, the rebels find you and leave you in the book. If you trap Gehn in the book and then free him and trap yourself (in anywhere but Tay), he thanks you for freeing him and leaves you in the book. If you trap Gehn, take the book to Tay and then release Gehn in Tay, he leaves you trapped in the book, and worse, you are responsible for having led Gehn to the rebel Age, betraying the Moiety’s secret. Gehn says, with sinister overtones, “The Moiety and I will finally be able to discuss our differences face to face,” but since he is alone and without a boat and without

much knowledge of Tay, he could just as likely end up being at the mercy of the Moiety as well.

In the last four endings, the game ends with the player's death. If you trap yourself in the prison book anywhere but Tay *before* meeting Gehn, Gehn has Cho (the guard seen at the very beginning of *Riven*) link into the book, sending you out of the book and into the cage in his office, and then Gehn shoots you and introduces himself as you gradually lose consciousness. If you trap yourself in the prison book anywhere but Tay *after* meeting Gehn, Gehn has Cho link into the book, sending you out of the book into the cage in his office, and then he congratulates you on finding the book for him (since he has seen you before), and then shoots you. If you refuse three times to enter the prison book when Gehn holds it up for you, he realizes you are trying to trap him and shoots you. And finally, in the last and worst possible ending of the game, you open the star fissure and signal Atrus without having captured Gehn or rescued Catherine. Atrus arrives and looks puzzled as to why you have accomplished nothing, and then Gehn arrives and, after a brief dialogue, shoots Atrus, and then Cho shoots you, as *Riven* is collapsing. After all the endings, end credits follow, with different pieces of music depending on whether the ending is happy, sad, or bad.

One ending that appears to be possible is to rescue Catherine without capturing Gehn; but this is not possible because Catherine cannot be freed without the combination for the barred door of the elevator, which is found in Gehn's bedroom, and Gehn's bedroom can only be accessed after Gehn is captured. Unlike the combination for the star fissure, which also can change, the combination for Catherine's prison is not set until the player visits Gehn's bedroom, so even if one tries all possible combinations Catherine cannot be freed unless Gehn is captured.

Although there is a prescribed order to the game's objectives and some of its events, the majority of *Riven's* gameplay is relatively open-ended and similar to *Myst*. The clues to different puzzles intermingle, and exploration and navigation are central to the experience. Still, even when faced with choices, the player may be more likely to move in a particular direction, an exploratory path of least effort requiring the least amount of puzzle-solving, which will determine the order (at least initially) in which things will be seen, and it is in this order that the following islands and Ages of *Riven* have been arranged (alternate names of the islands as they are colloquially known are given in parentheses, since the islands are not named in the game).

TEMPLE ISLAND (DOME ISLAND)

At the start of the game, the player links to Temple Island with the star fissure telescope in view. As soon as the opening animation is done and the bars are removed, the player is free to investigate it. It is present in the first view (see fig. 17), and no matter where you click you move closer to it (a long wooden walkway in the distance along the top of the screen also entices us with unseen destinations).

Without steam, the telescope does not function; the only movable parts are the button, the switch by the button, and the stop underneath that prevents the telescope from going down too far. Both the switch and the stop can be moved up and down, and in either case nothing happens, just like the marker switch one first encounters on *Myst*. Our experience with *Myst*, however, suggests correctly that this telescope will be used at the very end of the game. We have seen the idea of “beginning with something from the ending” several times in *Myst*; in four of the Ages, the locked or blocked entrance to where the *Myst* linking book is kept is right near the area where we arrive at the Age, and even the first marker switch we see, on the dock, is later used to obtain access to the white page at the game’s end. So the enigma of the telescope should be a familiar one.

The other direction available presents views of distant islands and tramlines between them (and the fallen guard, if we look down in the right place) and leads us to a stairway. Going upstairs we see the view from the cover of the instruction booklet, another long bridge, a stairway down on the other side, and the entrance to the Gate Room. In the Gate Room, with its foreboding ambience, we find golden beetles inside of which are the five stained glass images found on the CD jackets, images of Gehn’s versions of his deeds designed for the instruction of his subjects. Standing outside the Gate Room and pushing the button rotates the whole room, creating one of the best architectural puzzles in *Riven*, in which the two doors must be aligned and realigned to get from one place to another between the five entrances. The key to the puzzle, of course, is the secret door found in the cave, which allows the player to get to the room where the steam power source is, as well as open one of the locked doors. The door to the cave is locked, and so many people gave up on the locked door in *Riven*’s beta testing phase that the Moiety dagger on the ground was added as a clue. The solution involves the player crawling under the door, and it is an interesting reversal of the navigation in *Cosmic Osmo*: whereas the size of the implied

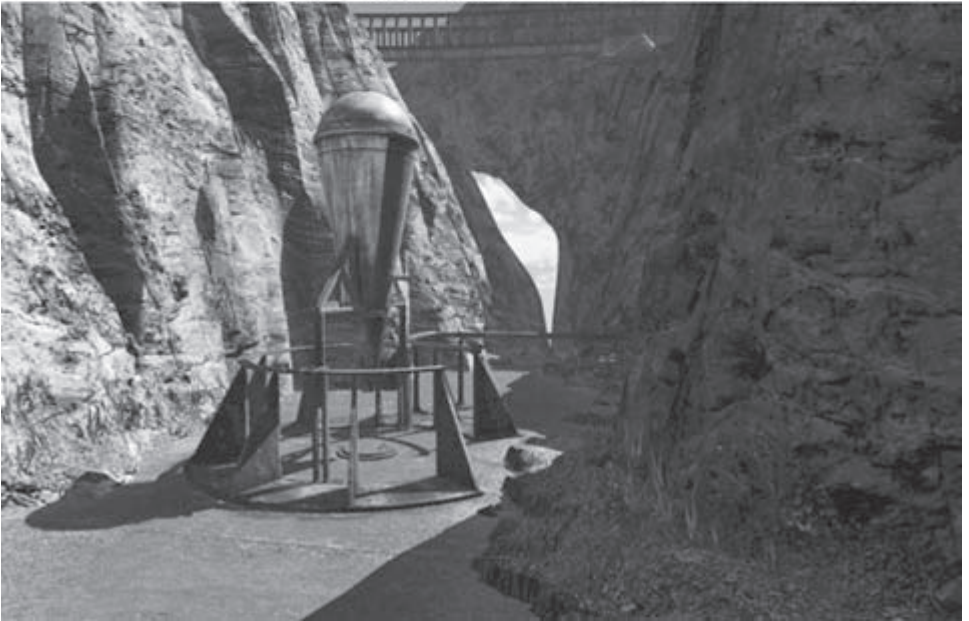


Fig. 17. The first two views encountered in *Riven*

spectator varied greatly in *Cosmic Osmo* such that the player could click on a mouse hole or drain and expect to go inside it, the consistent size of *Myst's* and *Riven's* implied spectator may have made the test audience unwilling to try doing something that involved crawling instead of merely walking. The lock on the gate also implied that a key was the solution to the problem, rather than another way around the door.

Beyond the Gate Room lies the golden dome, accessible to the player who has mastered the workings of the Gate Room, although this part of the island is only accessible later in the game, when the island is approached from the other direction. Around and within the golden dome are stairways, walkways, and an elevator that the player must figure out how to navigate in order to get to the fire marble press that powers the dome, the rotating domes where the 233rd Age linking books are located, another steam power source for raising the walkway, and the walkway to Book Assembly Island. At present, the player can only go behind the golden dome and turn on steam power to two of the walkways; the other areas cannot be reached. Eventually, the rest of the machinery surrounding the golden dome has to be figured out before the player can link to Gehn's office in the 233rd Age. The layout of the walkways and machines does seem more complicated and difficult to navigate than it would be if Gehn had designed them for ease of use. It is also unclear why the power is off or how Gehn gets back to his office without the linking books, or why we do not run into him in the game until the power is turned on; but, of course, if the power were already turned on when the player arrives on Riven, several of the game's good puzzles would be eliminated.

The player desiring to see as much of the islands as possible without stopping to solve the puzzles early on in the game will likely leave the Gate Room for later and take the walkway over to the other side of Temple Island (the walkway is so long and so high above the ground that it seems at first that you are traveling to another island, rather than remaining on the same one). Here one finds a tunnel in the rock with a door that leads into a room with a chair (colloquially nicknamed the spider chair) and the recording apparatus for an imaging device. On the wall are two viewscreens of areas the player has not yet seen, and one of them features a switch for raising and lowering a door. Following the tunnel, we arrive at the temple to which the spider chair's image is sent and where the door seen on the viewscreen is located. Even though the door from the tunnel to the temple is camou-

flaged, neither that door nor the door to the spider chair room is locked, so one would think that eventually one of the villagers would discover the spider chair room and Gehn's trickery, but from the offering left by the wahrk statues, this apparently has not happened yet.

Outside the temple is the first maglev station the player encounters. You must be facing the maglev line when you push the blue button to summon the car; if you go up the steps, turn around, and then try to push the button, you will be resituated with a view going around behind the stone structure that supports the maglev line, where two more islands can be viewed in the distance (perhaps this was done so that the view would not be missed). Entering the car, one can take a thrilling roller-coaster ride to Jungle Island that ends with a CD-ROM change (unless one has the DVD version of the game). After viewing static scenes with a few integrated animations, the ride is enjoyable for its full-screen video and fluid movement through space on the z-axis, which helps to take the sting out of the intrusion of the real world into the game in the form of a CD-ROM change.

JUNGLE ISLAND (VILLAGE ISLAND)

Arriving on Jungle Island, on the way to the stone staircase in the tunnel, we pass one of the rolling "eyeballs" on the island. These balls associate sounds with symbols, which we later learn are animal sounds and D'ni numerals. In the tradition of *Myst's* audiovisually redundant clues, the association can be made purely visually; if one stands at the right place, an outline of the animal appears with the eyeball situated where the animal's eye would be. The puzzle for which these sound/numeral combinations are clues is the five-animal sequence that gives access to the Tay book in the Moiety Cave. Granted that these eyeballs might have been installed by the Moiety as clues for the other Rivenese villagers who wished to join them (though it seems a rather inefficient way to do it, and one that Gehn could discover just as easily), how and why did the animal outlines (except for the Sunners, who don't get an outline) get integrated into the very rock of *Riven* itself? Did the Moiety carve them, and if so, why would one of them, the fish, be visible only from Gehn's viewer on Survey Island? (Perhaps this is just another one of those things that one accepts for the aesthetics of the game, like the fact that there does not appear to be much in the way of bathrooms anywhere in the worlds of *Myst* and *Riven*.)³

Much further along, the stairs take us past a blue-green button on a pole, the kind used for summoning the maglev. It is far removed from the station, unlike the other button on Temple Island, suggesting that it was placed here to avoid including an extra animation of the maglev arriving at the station. A few steps more and we are out of the tunnel, on a landing where stairs extend up and down, both somewhat steeply. Faced with such a choice in real life, more effort would be needed to take the stairs going up, but in the game either way is just a matter of a few clicks, and perhaps both are equally likely to be taken by the player. In our first view of the two staircases, the down staircase has three times as many steps visible as the up staircase, so perhaps we are subtly urged to go in that direction. On Jungle Island particularly, the player is faced with so many choices of which way to go, that there does not seem to be a prescribed way to encounter the island.

Taking the down staircase, we pass the Sunners lying on the rocks, who eventually see us and swim away (how quickly we approach determines when they are scared away). Another eyeball can be found on the rocks in this bay as well. The Sunners and other creatures and people that inhabit *Riven* add greatly to the verisimilitude of the world, and perhaps even a slight feeling of potential danger (though nowhere near what is encountered in a game like *Doom* [1993]). The path continues around the Sunners' bay, through another tunnel, and out near where a guard in a tower sounds a siren signaling the player's arrival, which always happens when the player nears the village, so that one can never approach its inhabitants (just like the Sunners). This fear of strangers is even worked into the storyline, and is a clever way of including a village without all of the messy interactivity that would normally have to be programmed along with it all. The path next leads into the inland sea, and down ladders to another eyeball, and down again to the place where we would board the sub if it were raised, which of course it isn't (another place to be remembered and used later).

Backtracking to where the staircase goes up and down, we take the one going up and cross over a bridge into the clearcut area where we are faced with three paths; two into other parts of the island and one into a cart traveling in an underground tunnel to Book Assembly Island. Taking one of the island paths, we come to a wooden door with a golden beetle on the doorpost, which we can examine up close before it flies away. Early in the game, the Sunners, the beetle, and the other animals do not stick out as clues, but seem just a natural part of the rich detail of the world, one of the strengths of *Riven's* design.

Taking the path behind the wooden door, we go down through a forest and past one of the big daggers on Riven, near which another wooden eyeball can be found. In a short tunnel (which is under the rotating dome) the path forks. On the left it goes past a chasm of fiery magma, and up to rejoin the other island path encountered earlier. On the right it goes down to the wahrk totem, an imposing wooden statue, the mouth of which opens up to reveal stairs to a secret elevator.⁴ The blue-green button on a pole hints at the presence of another maglev station. Taking the elevator down, we are confronted with a wall with a seam down the middle, like metals doors that will not open; the trick turns out to be that the exit is behind us. In real life, air currents and directional ambient sound might have made us immediately aware of the opening behind us, but it provides a nice little puzzling moment in the game. A maglev station is present there at the bottom level.

Taking the elevator to the top level brings us to walkways over the jungle. These go to the rotating dome (the first one we can see up close), a phenakistiscope-like viewer through which we can see the rotating symbols on the dome, and a bridge to the golden wahrk throne, where the floor of the wahrk gallows can be opened. The wahrk and Gehn's use of it in his religion as a means of intimidating the villagers is well established by now, although it does seem that the Rivenese people could also get the behind-the-scenes view of things that we have had, especially the Moiety who seem less afraid of Gehn. The rotating dome can be opened by clicking the button atop the phenakistiscope-like viewer either at the right time or randomly a few times until one gets the right timing by chance. The dome opens and a linking book can be seen locked within it. It will be some time before the player can find the combination for the domes (one of three combinatorial solutions that can change from game to game), but the player receives a step in that direction by at least seeing inside the dome. This is another good element of the game's design, that clues and connections between things are parceled out over time to give the player a constant sense of achievement and a sense of always inching closer to unraveling the puzzles.

Returning from the wahrk totem, to take the island path leading to the village, we encounter one of the pleasant surprises of the game: a little girl stands on the path looking at the player, and then turns and runs off down the tunnel (she cannot be followed, however). After getting used to being the only person around, the moment can be a startling one, even though it is only a child (a similar occurrence happens in *Gadget* [1993]). Such sudden appearances happen a few other places in *Riven*: in the temple, when

you return to it by the main door when it is closed, Gehn's image appears in the imager; and underground in Survey Island a scribe appears in a tunnel, whom you can chase and see leaving on a maglev car.

On the way to the village we pass through a rock tunnel where there is a drawing on the wall of a figure (Gehn) feeding the wahrks, another intimidating image. Upon arriving outside the village we see an animation of the distant villagers running away to hide; a mother comes and picks up a child sitting on the dock and runs away. We can explore only a little bit of the village and knock on one of the doors (which is answered only after five knocks; one can see how Gehn worked the number five into other aspects of the island, but how did the number five get worked in here?). The village is perhaps the one area in *Riven* where the player would most like to move around and explore things, and is not permitted to do so. The short walk through the edge of the village to the cliff where the submarine is parked is only enough to whet our appetite, and the rest of the village remains tantalizingly off limits. All the player can do is lower the submarine (you can sit in it before lowering it, but none of the controls work), and you can't even get to it without going all the way back around the island (again, normally the submarine and its station would have been designed for more convenient access, but it all adds to the difficulty). From the village dock to the Sunners' bay, however, you can keep the cursor on the exact same place on-screen, just right of center between the middle and the bottom of the screen, and it takes 39 clicks to get there (with zip mode it takes 17 clicks for the same distance, but the cursor has to be moved around).

Once you are in the submarine, the locations around the village lake can be explored. The only place you can go at first is the room with the five switches, for raising and lowering the ladders (another place for the sake of making the game harder; there seems to be little practical purpose for such a place, especially since raising the ladder for the stop you are at would not allow you to leave). The next stop is the schoolroom, which Gehn uses to indoctrinate the villagers, and teach the D'ni language in order to build his mock guilds. Here we see such details as the spelling test where the name *Gehn* is misspelled, and the only machine to use here (and source of clues) is the wahrk gallows toy that teaches counting by D'ni numerals. This is the first piece in another type of puzzle found in *Myst* and *Riven*, which could be described as a series of connected codes. In *Myst*, the dates in the tower were connected to starfields in the planetarium, which were connected to constellations in the library book, which were connected to the plaques

around the fountain and the combination for raising the ship. Here, the toy connects numbers to D'ni numerals, which are connected by the wooden eyeballs to animal sounds, which are connected by the animals themselves to the images of the animals, which are connected to the icons of the animals on the stones in the Moiety Cave and the combination for accessing the Tay linking book. Another such puzzle, with two series of connections, is involved in the powering of the big golden dome and the smaller domes containing the linking books. Each rotating dome is in a particular place on each island; the locations are connected to the geography of the islands as seen in the map on Survey Island; the map locations are connected to positions on grids representing the islands, which provide the correct positions for the fire marbles in the press in the big golden dome. The correct colors of the marbles have a chain of connections of their own: each of the islands' domes is connected to a circular symbol (the one that is used to stop the dome from spinning); the circular symbols are connected to colors in the viewer in the underwater wahrk viewing room; and the colors are connected to the fire marbles in the press.

The combination, however, does not mean anything until one has found out where it is to be used. Another stop for the sub is the wahrk gallows, which the player cannot step onto unless the player has already found the wahrk throne overlooking the village bay and closed the gallows floor. Stepping onto the gallows floor, the player can then pull the handle and be raised up on a kind of trapeze to the walkway by the prison door (the walkway also has a ladder that provides a shortcut back down to the path). The man we see in the prison disappears when we open the door, indicating a secret exit (the man also serves as a watchman who warns the Moiety that we are coming, resulting in our capture when we arrive on Tay). A quick search reveals the hidden door, which leads to the Moiety Cave, and with the five-animal sequence, we are able to access the Tay linking book.

The Moiety Cave is the most difficult place to access on Jungle Island: to get there, we must have closed the wahrk gallows floor (and thus have already been up on the walkways over the jungle, which requires using the wahrk totem elevator); we must have used the submarine, which requires us to have been on both sides of the island around the village bay, one to lower the sub and the other to board it; we must have learned D'ni numerals in the schoolroom; and we must have seen the five animals and heard their sounds, including the frogs that are on Book Assembly Island, where the fifth eyeball is with its number (or the player could have seen the fish

outline through the viewer on Survey Island, and figured out that this is the missing animal). Of course, even without the information from the other islands there is enough information from Jungle Island alone to narrow down a brute force search of the combination, though it would still take some time to find it that way. With the naturalization of so many clues into the background of the world (the animals and their noises, the numbers on the gallows toy, and so on), these puzzles are some of the best ones in *Riven* and in the adventure game genre in general. Once the chain of clues reaches the stones in the Moiety Cave, one is finally able to watch the beautiful effects of water flowing in the channels of the walls in the Moiety Cave and link to Tay.

TAY (THE REBEL AGE)

Linking to Tay, the player is finally rewarded with the view that appears on the *Riven* box; the rebel hive that looks like a huge tree on an island, in the distance across the water. Tay is only seen with a dusky, darkening sky, which helps to keep it shrouded in mystery. There is only one place to go, and that is into the cave at the bottom of the cliff behind us. There a linking book back to *Riven* is held by an effigy of Gehn. All we can do is walk forward to it, and before we get there, we are turned around as we are ambushed and darted by two of the Moiety. The whole visit to Tay is more video footage than exploration, a kind of interlude during our mostly solitary travels. The next clip shows the point of view of the player slowly gaining consciousness and fading again, just enough to see the rebel hive from the canoe taking the player there. A native in the front of the canoe points to the general location of the prison room in the hive where the next scene will occur. We awake in a small, almost bare room, with nowhere to go but the hallway to the locked prison door. Through the door we see the inside of the hive, a series of ball-shaped huts amidst branches of the great tree, joined by walkways, overlapping into the distance. Four embedded animated sequences hint at the activity going on there.

As with the village, we are prevented from exploring the beautifully detailed and rich environment, even though the hive and the village are the very places we would most like to see. Such places are important to the fantasy genre, either as imagery or as descriptions in a book; there must always be faraway places on the horizon of which we receive only a tantalizing glimpse, leaving the rest to our imagination. If the entire subcreated

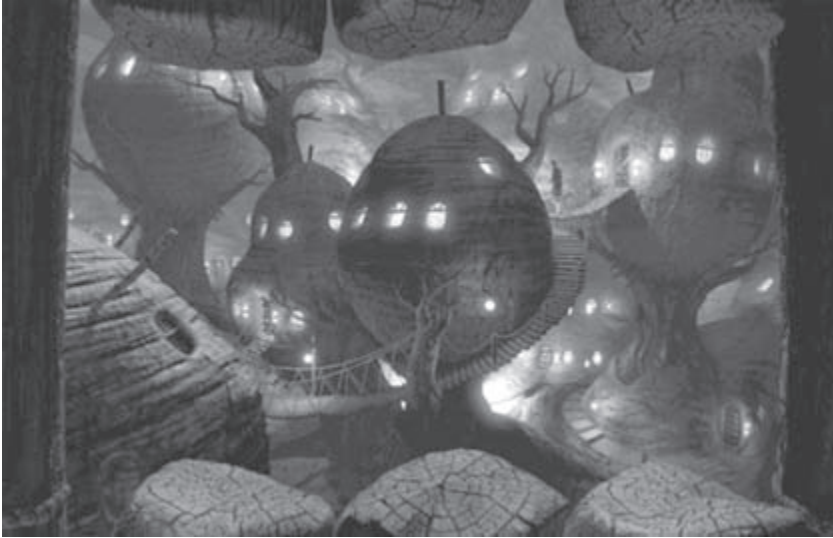


Fig. 18. Inside the rebel hive on Tay, where we are not allowed to explore; almost everything is left to our imagination.

world can be explored and known to the smallest detail, the world will have become too small, too familiar, and all sense of vastness and mystery, the feeling that there still remains much we have not seen, will be lost. Left to wonder and speculate, we can never be certain of what lies beyond what we can experience, and we can therefore keep reimagining it, keeping the world alive and fluid instead of exhaustively known and fixed. Enough detail must be present to make the world believable, and a skilled subcreator will know just how much detail is needed for players to feel they know enough about the world to speculate about what they do not know or see in it, while blurring the line between what is actually there and what is imagined.

Returning to the cell and looking out the back window (we can see the small dock where we originally linked on to Tay) and then turning around again triggers the next video clip. Nelah returns the prison book to us, along with Catherine's journal. Our inventory bar beneath the screen now holds three books. In the next video clip, Nelah brings out a linking book for the Moiey Cave, complete with the crystal slice that powers the book. We have no choice but to return (apart from trapping ourselves in the prison book, which would result in the ending with the Moiey leaving us in the book, as discussed earlier). Any subsequent visits will leave us stranded in the cliff-

side cave, with nothing to do but view the hive across the lake, examine the effigy up close, and link back to the Moiety Cave again.

The visit to Tay rounds out our experience in *Riven*; since we visit Gehn's office and workroom, and hear his side of the story, meeting the Moiety gives us both sides of the conflict. Apart from a few frightened villagers, it also provides contact with characters midway through the game, which is nice since most of the contact comes at the end of the game when we trap Gehn and rescue Catherine (or fail to do so). And now, with the prison book in our possession once again, we are ready to confront Gehn (or return to see him, if we have gone there already).

BOOK ASSEMBLY ISLAND (CRATER ISLAND)

From Jungle Island, the player can travel to Book Assembly Island via the mine car, or Survey Island via the maglev. As the maglev station is hidden and the mine car is not, the casual player is more likely to travel to Book Assembly Island before Survey Island. The ride in the mine car ends with a surprise; after a moment's pause we slide out of the cart, down a chute, and out into Book Assembly Island (we can climb up and back into the cart again as well for the return trip).

Right near the ladder we climb down is a kind of chipper-shredder, used for making the paper for the books. It runs, but is not useful to the player. The next machine we encounter is the boiler, which is turned on (this is apparent even at a distance, since rows of little blue flames are visible under the boiler). This, in itself, is a clue. Machines in *Myst* and *Riven* typically require us to change whatever state we find them in, so more than likely turning the boiler *off* will be part of the solution to the puzzle (compare this boiler to the one in the cabin on *Myst*, which we find turned off). As it turns out, we must turn the boiler off, drain it, and go inside (the door opens with a nice animation of the bolts unscrewing) and crawl down into the drainpipe. Before going through the pipe, we could turn the water power to the third pipe that leads to the other side of the island, to avoid backtracking. Curiously, the mechanical door of the boiler still works even when the water power is diverted elsewhere.

Going through the pipe, we must click four times in total darkness, a completely black screen (similar to the unlit stairway of the Stoneship Age). We climb a ladder inside the pipe (why is there a ladder inside the pipe, anyway? And how did the water drain out earlier if the pipe goes uphill?)

and fall out the end of it onto the hillside. We cannot climb back up into the pipe, making it one of the few one-way passages in *Myst* and *Riven*. A path takes us over the hill and onto the balcony, where a manhole gives us access to a ladder to the ground, which the player can use to return to the switch if water was not diverted to the third pipe.

Opening the doors, we go down the walkway to the frog-catching apparatus. After learning to operate the trap, the player can view three different animations of the frogs (they are called “ytrams” in Gehn’s workroom journal) after they are caught. Beyond that is the question of what to do next. Some of the best moments in games of the *Myst* series are when there does not appear to be anything to do, when the player seems to have hit a dead end. In this case, finding the next place to go is a small but clever puzzle, like the melting ice in the Rime Age. Given only a few objects with limited usefulness, what can be done?

The answer is simply to close the doors, even though it seems we are only closing ourselves into the cave. Behind the doors are two tunnels, and the one on the left goes to another rotating dome. A peephole reveals the location of the viewer used for stopping the dome, but it is unclear how to get to it. The solution is one of the few instances of humor (if you can even call it that) in *Riven*; it is the same exact trick used a second time. Close the door of the room with the rotating dome, and another tunnel is revealed, with leads to the viewer.

Back at the double doors to the cave, the tunnel on the right leads out onto a walkway on the cliffside. The walkway goes past Gehn’s workroom (locked, of course), through a tunnel, and out over the water all the way to the golden dome on Temple Island (which we can reach, if we had the good sense to turn on the steam). Here the player can finally access the areas of the golden dome that were previously inaccessible, and extend the curving walkway in the dome and open the door to the Gate Room, to provide full access later in the game.

But on Book Assembly Island there is still the question of getting inside Gehn’s workroom. Eventually the player will notice the power line that turns off the fan. Once the fan is off, the player must figure out that one can climb into the air vent and crawl through it (this is foreshadowed by the crawling through of the pipe from the boiler, but at least there a ladder invited us to descend into the pipe). Accustomed to a realistic implied size of the player, it may take a while before the player thinks of climbing into the air vent. This is, after all, more like something we might try in *Cosmic*



Fig. 19. The air vent does not appear to be big enough to crawl through, but it is.

Osmo, where we might even be able to ride the frog trap down into the chasm (perhaps these things are more common in the “Osmoian Age” that Atrus mentions in one of the library books). After all, the space on either side of the bar across the diameter of the vent does not seem large enough for a person to crawl through, yet it is (see fig. 19).

On the other hand, there is something of a tradition of crawling through air vents in the movies, especially in spy films (villains’ hideouts in the early James Bond films always have air vents big enough to crawl through). In any event, this is how we get inside Gehn’s workroom.

If we arrive earlier in the game, before meeting Gehn, his pipe and gun are left lying on the table; otherwise they are gone. It would have been nice if the player could have taken Gehn’s gun, and it certainly would have changed the rest of the game, but the player can’t do anything with it. On the five sides of the workroom are two doors and three tables, with implements for making books and for making a smoking extract from the frogs. A burned linking book can be found in the stove in the center of the room. Gehn’s journal is the main source of clues here, including the combination for the rotating domes (which can change from one game to the next). Gehn’s workroom has a wealth of interesting detail, though sometimes we

might wish there was even more; you can only open the top drawer in the chest of drawers, unlike in *Myst*, where you could open all the drawers in a cabinet, even if they were empty. Gehn's workroom, along with his office and bedroom in the 233rd Age, gives insight into and acts as an externalization of Gehn's character (just as Sirrus's and Achenar's bedrooms did in *Myst*), and the journal gives a voice to his thoughts. The overall effect makes Gehn a more well-rounded character, and even sympathetic, to a point.

Leaving the second door of the workroom, we stand on a patio with a three-view triptych (clicking to the right and to the left) of three of the Riven islands in the distance and the means of transportation connecting them. And stairs lead down to the station for the maglev car going to Survey Island.

SURVEY ISLAND (MAP OR GARDEN ISLAND)

Depending on how the islands are traversed, the player will enter Survey Island at one of the two maglev stations, both of which lead into underground tunnels. The player who first visits the island via the maglev from Book Assembly Island will get to see the animation of the golden elevator rising out of the water. If you leave the elevator raised up out of the water and want to see what it looks like coming down to its other position, you would have to travel by maglev back to Book Assembly Island, take the mine car to Jungle Island, then take the other maglev to Survey Island, and go down the hall to the lower elevator stop—only to find it is already there, as if someone had summoned it while you were gone. In fact, it is impossible to watch the elevator arrive on the lower level, and there is no animation for it. That *Riven* is consistent and complete enough that such gaps and omissions seem surprising is testament to the success of Cyan's subcreation.

The lower-level hallway connects the maglev stations and also leads to the Wahrk Throne Room. On the way there from the golden elevator, we encounter one of Gehn's scribes, who runs away. Fortunately, we can follow him, and the next animation around the corner shows the scribe escaping in the maglev car. It is the only time in the game that we can see the maglev leaving the station instead of just arriving, making our experience of it more complete; we have pretty much seen it do all it can do, from inside of it as a passenger and outside of it as a bystander.

The Wahrk Throne Room, which changed during the design process from a closet in the original design to a grandiose high seat in a huge under-

ground chamber, features two machines of Gehn's. On the left is a viewer with two buttons; the left button shows a fixed camera view of Catherine's prison (although the player may not recognize it as such right away), and the right button shows a rotating view of the village bay, which includes the fish's outline. While this room seems an out-of-the-way place for such a viewer, the machine on the right-hand side justifies its subterranean location. The wheel is mainly used for matching colors to the six circular symbols (five of which are found on the rotating domes), and one of the buttons will light an overhead light and summon the wahrk. Four animated sequences of the wahrk can be viewed, the last of which has an angry wahrk head-butting the window. The wahrk looks like a cross between a *whale* and a *shark*, which is where the name comes from as well (and may be why the name is misspelled "whark" in Gehn's journal).⁵ The fact that the animals have been spread throughout the islands (the wahrk here, the ytrams on Book Assembly Island, the rest on Jungle Island) helps keep the game from becoming too static and solitary (it is perhaps no coincidence that the islands and Ages without animals are the ones where people talk to you).

Returning to the maglev to Book Assembly Island, one can rotate the car so as to get out on the other side of the station as well, where stairs take us to the upper levels of the island. There we pass through jagged rocks jutting from blue-green waters, and up through a cleft passing through large-scale models of Riven's islands. An elevator takes us up to a balcony for an overhead view of the island models, complete with a controller that raises mounds of water on them (though only one can be done at any given time). Because the island models and the mounds of water atop them can be seen through the cracks in the rock during the elevator ride, four different elevator ride animations are needed (the smallest island cannot be seen during the elevator ride), and it is likely that most players will not see all four versions of the ride, or even notice the need for different animations.

Getting out of the other side of the elevator, one finds the island's rotating dome and its viewer, and directly ahead, the round map room with the pinscreen topographical imager. Whatever island is pressed on the control on the other side of the island appears in the imager. One can then select a square to get a high-resolution topographical map of that area. This imager allows the player to note exactly the positions of the rotating domes, so that the positions can be used for the fire marbles in the press in the big golden dome. Each of the 25 squares of the map have five animations each, four for rotating 90 degrees from one position to the next, and one animation of

the pins going up or down (the same animation can be played in reverse for the opposite movement). This means that there are 125 animated sequences needed to animate the map, and this might be one reason why Survey Island is much smaller than the others. It could have been bigger, though, as the fourth *Riven* CD-ROM also contains a 138.4-megabyte folder containing a demo of *The Journeyman Project 3: Legacy of Time*. A look at the demo of the game, and how relatively lacking it is in the area of production design, reveals how far *Riven* was ahead of its contemporaries. *Legacy of Time's* computer-generated models are simpler and less textured, its lighting flatter and less nuanced, its camera movements too stiffly geometric, and its video more roughly integrated (and sometimes overacted), showing just how good *Riven* was by comparison. For example, compare some of *Legacy of Time's* Atlantis footage (by viewing the movies in the AR folder called ARDO.mov and ARDP.mov) with the dramatic monologues delivered by John Keston playing Gehn in the video sequences in the 233rd Age.

THE 233RD AGE (GEHN'S OFFICE AND BEDROOM)

After figuring out all the puzzles pertaining to the domes, we can travel to the 233rd Age and confront Gehn. According to the journals and the novels, Gehn was in his thirties around the time when he was trapped on *Riven*, where he has been for another thirty years. The 233rd Age is his first successful attempt at writing an age while on *Riven*, so the other ages must have been written before he was trapped on *Riven* (unless he named and numbered his failed attempts). Supposing that he was at least in his teens at the time he wrote his first age, that means that he had at most some 20 years or so in which to write over 200 ages, which means he would have to write a complete age every five weeks or so, continuously for 20 years to get them all done. Considering the difficulty in the writing of ages and the way in which Gehn pieced his ages together from phrases in other D'ni books, this at first sounds rather hard to believe; but Richard A. Watson has explained how this is possible:⁶

The majority of Gehn's Ages were very short as he tested the effects of various phrases that he was copying from other Books.

As page 123 of *The Book of Atrus* explains, a Descriptive Book will [connect] to an Age once the very first word is written. It's just that the more detailed your description, the more the Age will match what you

want. If you just write the word “island” and use the Book, you’ll link to a complete Age, but the only thing you’ll know about it before you get there is that it will have an island. Everything else will be filled in “at random,” meaning the Book will just link to one of countless Ages that matches your generic description. You don’t even know if it will have oxygen or not. Not a good idea.

So many of Gehn’s Ages would have just been a few paragraphs to cover the safety kinds of things and the particular phrase he was trying to test. (Similar to the test Ages that Atrus writes at the end of *The Book of Atrus*.)

Ironically, these shorter Ages of Gehn’s are much more likely to have been stable, as they were too short to have many contradictions in them.

To use the programming analogy for the Art, many of Gehn’s Ages were simple, such as:

```
10 PRINT "Hello"
20 GOTO 10
```

The 233rd Age, certainly, is much simpler and smaller than Riven. We get an overview in the linking book’s descriptive image right before entering, and all we have to explore once we get there are two rooms, Gehn’s office and his bedroom. Gehn’s desk is one of the most beautiful settings in the game, with the austere elegance of burnished metal and marble, glass, leather, wood, and stone. The office does not allow us to do much, except for lowering the cage, powering the linking books, and playing the cannen (Gehn’s music recorder). The cannen, on which Gehn recorded himself playing the maral-obe, is the first indication of Gehn’s more sensitive side, which we learn more about in his bedroom. As we descend into Gehn’s bedroom, we go deeper into his personal life, motivations, dreams, frustrations, and even regrets. The bedroom is one of the most beautifully and delicately rendered rooms in *Riven*, and the one with the most emotional content. His journal bears his private thoughts, like the ones quoted earlier in the discussion of character development in *Riven*. On the wall are pictures of his father Atrus and his wife Keta, and on Keta’s picture there is fine handwriting that reads, “To Gehn my husband and my salvation, I dedicate myself to the love that rescued me.” The 233rd Age is seen at sunset, and that mood pervades both rooms. One can easily imagine Gehn sitting alone in his room as night falls outside, writing in his journal and experiencing profound loneliness, alone on a desolate mountaintop in an uninhabited Age.

His desire to see the D'ni civilization reborn suddenly seems less a lust for power and more a need to be with others and an attempt to regain what he has lost. Even if we do not believe his claims of having reformed, we can at least understand and have sympathy for him at this point.

Gehn is the most interesting character in the *Myst* series, and perhaps the most well rounded. At least the player is not asked to kill Gehn but just to capture him in the prison book, which means that he could very well return in some future *Myst* game just as Sirrus and Achenar return from their prison books in *Myst IV: Revelation*. Whatever the case, it is Gehn and his ambitions that drive the narrative and design of *Riven* to a degree found in no other game, and that make the game an artistic success.

PRISON ISLAND

Gehn's office is also where you find the linking book to Prison Island, where Catherine is held captive. You can visit Catherine at the point in the game after you meet Gehn and before he is captured, but the bars of the elevator door prevent you from entering her room. She gives a few hints and words of encouragement and sends you off again.

Once Gehn is captured, the player can go to Prison Island and release Catherine. The island is quite small, with only three locations; the rotating dome outside, the elevator that goes up to Catherine's room, and the room itself, which we can look into but never enter. The game ensures that the player will have to have at least visited Gehn's bedroom, and thus be exposed to the depths of Gehn's character, before Catherine can be rescued; the combination for the Prison Island elevator is found in the timepiece on Gehn's nightstand, and no code is set for the elevator until the bedroom is visited, so that even a brute force search for the combination will not work.⁷

When Catherine is freed, she takes over in a series of animations, as she leaves in the elevator with the player, thanking the player and explaining how to signal Atrus. She then runs off down the hall and disappears on her way to the rotating dome, and we cannot follow her until she is gone. When we return via the linking book to the 233rd Age, Catherine has torn out pages from all the linking books except the one to Temple Island (and, as it turns out, there is no longer any way to get off Temple Island). All that remains to be done is to open the fissure, and players will always have the combination with them because you can never drop any of the books you carry in *Riven* (apart from linking into the prison book).

RIVEN'S FORTUNES
AND THE
REST OF THE *MYST* SERIES



Riven was released October 28, 1997, rather late in the year, yet it still went on to be the best-selling game and the second-best-selling software title of 1997, with 640,000 units sold by year end; it was beaten only by Microsoft's Windows 95 CD Upgrade, which sold 659,000 units.¹ By early March 1998, *Riven* would reach one million units sold, generating new interest in *Myst*, which, amazingly, was still among the top five best-selling software titles of 1997.² By September 2004, *Riven* had sold just under three million units.³ *Riven*'s beautiful design and attention to detail, combined with its engaging gameplay and storyline, make it one of the best games in the adventure genre, and arguably the best when it comes to design and story. It continues to be popular, and many fan websites have appeared for the game, discussing it as well as pointing out such things as Easter eggs (like a clip of Gehn singing opera, or an old commercial for Silly Putty that appears on Gehn's viewer), interesting details, and even mistakes appearing in the game.

After *Riven*, Rand and Robyn Miller dissolved their partnership as Robyn went on to form a new company, Land of Point, and begin development on something code-named "Project Green Tea." Rand Miller would continue to head Cyan, where a secret project, code-named "Mudpie," became Cyan's next challenge. While Rand would still reprise his role as Atrus in *Myst III: Exile*, Cyan would hand the reins for the actual creation of the game to Presto Studios. During its development, three different companies, Mattel, The Learning Company, and Ubisoft, held the rights to the *Myst* product line, slowing down the game's progress. *Myst III: Exile* finally

appeared in 2001, and its storyline took place sometime after the events of *Riven*, with Atrus, Catherine, and their new infant daughter Yeesha living on Tomahna. Atrus has decided not to restore the D'ni city and has instead written an Age, named Releeshahn, for the D'ni survivors. The age is stolen by Saavedro, a man from an Age destroyed by Sirrus's and Achenar's early doings, who wants revenge on Atrus's family. He escapes to an Age known as J'nanim, and the player goes there and to other Ages to recover the book. The game used panoramic images that let the player look around 360 degrees from any of its standpoints, and sound that moved around the player, panning speaker to speaker, as the panorama turned. As the opening scene in Tomahna demonstrates, even the integrated video clips continue playing as the panoramas move. *Myst III: Exile* was a successful game, but it did not reach the richness or subtlety of character-motivated design found in *Riven*.

Two years after *Myst III: Exile*, the project known as "Mudpie" was finally completed at Cyan; in November 2003, *Uru: Ages Beyond Myst* was released, along with *Uru Live*, an online role-playing game. *Uru* featured the same kind of real-time three-dimensional graphics that *realMYST* had, and took place long after the events of the other games; it is set in our time and is about the discovery and exploration of the D'ni ruins, and thus does not receive a number in the *Myst* series the same way the other games do. The online game extended the player's experience even farther, allowing many players to walk through the caverns and encounter each other's avatars, in new locations not included on the *Uru* CD-ROM. By February 2004, however, Cyan decided to shut down *Uru Live*, citing low player enrollments as the cause of its demise. The fact that *Uru* was released only for IBM-compatible computers and not for the Macintosh, and also required a rather high-end computer as well, may have been part of the reason that *Uru Live* did not generate the expected numbers. Players may also have wanted to complete the CD-ROM game first, and its release right at the start of the holiday season could have also kept players from joining *Uru Live* until it was too late. By fall of 2004, a Mac version of *Uru* was under way, expansion packs of the online material were also available as CD-ROMs, and an initiative known as *Until Uru* was working to get *Uru* back online again. At last in 2007, GameTap brought it back as *Myst Online*.

In late September 2004, the next game in the series, *Myst IV: Revelation*, was released. Like *Myst III: Exile*, it was developed and published by Ubisoft. The story brings back Sirrus and Achenar, and Rand Miller once again

appears as Atrus. The final game in the Myst series, *Myst V: End of Ages*, appeared in 2005 and was developed by Cyan Worlds, and its storyline completes and brings closure to the series. But the Myst franchise continues to live on. In 2009, *Myst* became available on the iPhone and the iPod Touch. And as this book goes to press in winter 2011, there is talk of a motion picture version of *Myst* in the works.

MYST'S AND RIVEN'S INFLUENCE

ON THE

ADVENTURE GAME GENRE



In the years following *Myst*, the adventure game genre grew as other games using a similar point-and-click style of adventuring in mysterious, computer-generated 3-D landscapes hoped to intrigue audiences who had played *Myst*. The number of games influenced by *Myst* was so great that *Just Adventure* +, a website devoted to cataloging adventure games, has an entire category of games called “Myst-like” among its list of genres.¹ Following a few years of lead time during which *Myst*'s influence would infuse game design, *Myst*-like games began appearing en masse with the release of games like *The Journeyman Project 2: Buried in Time* (1995) (and later, *The Journeyman Project 3: Legacy of Time* [1998], advertised with a trailer on *Riven*'s disc 4), *Ray Bradbury's The Martian Chronicles* (1995), *Frankenstein Through the Eyes of the Monster* (1995), *Shivers* (1995) (and *Shivers II: Harvest of Souls* [1997]), *AMBER: Journeys Beyond* (1996), *Bad Mojo* (1996), *Gord@k* (1996), *Lighthouse: The Dark Being* (1996), *Noir: A Shadowy Thriller* (1996), *Obsidian* (1996) (which even featured an image of Achenar and a *Myst* book), *Of Light and Darkness* (1996), *Pyst* (1996) (a parody of *Myst*), *Rama* (1996), *Timelapse* (1996), *Titanic: Adventure Out Of Time* (1996), *Zork Nemesis: The Forbidden Lands* (1996) (and later, *Zork: Grand Inquisitor* [1997]), *Safecracker* (1997), *Treasure Hunter* (1997), and *Weird: Truth is Stranger than Fiction* (1997), just to name those from 1995 to 1997 and their sequels. After *Riven*, the trend continued with many more games, including those of the *Syberia* series (*Amerzone: The Explorer's Legacy* [1999], *Syberia* [2002], *Syberia II* [2004], *Syberia III* [forthcoming as of mid-2010]), *Riddle*

of the Sphinx: An Egyptian Adventure (2000) and its sequel *Riddle of the Sphinx 2: The Omega Stone* (2003), *Schizm: Mysterious Journey* (2001) and its sequel *Mysterious Journey II* (2003), and the *Rhem* series (*Rhem* [2003], *Rhem 2: The Cave* [2005], *Rhem 3: The Secret Library* [2008]).² While many of these games were able to feature stunning graphics (and occasionally, even stunning graphic design), many had fairly simple stories, which often were little more than a framing device to give a premise and context to the situation in which the player-character enters the game. The integration of puzzles into world design and storylines varied, and none reached the heights that *Riven* was able to achieve (partly because *Riven* was the story of people who designed worlds, and of the designer of the world in which the game takes place; a unique narrative situation allowing world design, narrative, and puzzles to be combined in a way few storylines can accommodate).

Although the adventure genre lost players to an increasing number of MMORPGs and first-person shooting games, whose three-dimensional graphics were steadily improving to the point where they could render imagery in real time that was more detailed than what was featured in *Myst*, point-and-click adventure games continued to be made, partly because the simplicity of the game engines required (like those based on HyperCard or Macromind Director) made the games cheaper and easier to produce (although this sometimes also led to games of lower quality). While three-dimensional graphics opened many new possibilities for adventure gaming (as the difference between *Myst* and *realMyst* demonstrates), and MMORPGs can offer many of the same experiences as single-player adventures (as in the experiments with *Uru* and its incarnations), games using the single-player slideshow format popularized by *Myst* can still be found, and seem to be a genre whose innovations have not yet been entirely exhausted.

Today, the *Myst* games are still selling, and at reduced prices. For under \$20, one can buy the *Myst: 10th Anniversary DVD Edition*, which includes *Myst Masterpiece*, *Riven*, and *Myst III: Exile* in one package (with an interview with Rand Miller), and the three *Myst* novels are likewise available in one book entitled *The Myst Reader*. And *Myst* and *Riven* continue to find new players as they are ported to new platforms, like the Nintendo DS, the iPhone, and the iPod Touch, where a younger generation may experience them for the first time. And while the series of *Myst* games appears to have ended, a movie based on the *Myst* novels is in the works, with the progress on it reported at mystmovie.com.

The *Myst* series, and *Myst* and *Riven* in particular, have changed the adventure genre and the world of video games as well, achieving the status of classics, and have become milestones in the history of video games and media entertainment in general. With its continuing adaptation to new platforms, the series will find its way to new generations and audiences, further establishing its place in history.

Notes

THE MYST PHENOMENON

1. Sales figures are from David Dorsey, "The Parable of Myst II," *FastCompany*, Issue 02, April–May 1996, p. 91, available at <http://www.fastcompany.com/magazine/02/myst.html> (accessed October 13, 2010). For the June 2001 figure, see http://www.npd.com/press/releases/press_010619.htm (accessed October 13, 2010).
2. See Trey Walker, "The Sims Overtakes Myst: Electronic Arts' Virtual-life Game Has Surpassed the Popular Adventure Game Myst in Terms of Sales to Become the Best-selling PC Game of All Time," *GameSpot*, http://www.gamespot.com/pc/strategy/sims/news_2857556.html (originally posted on March 22, 2002); and Chris Morris, "Goodbye Myst. Hello Sims: 'The Sims' Reaches a Milestone and Bean Counters Smile," *CNNmoney*, http://money.cnn.com/2002/03/27/commentary/game_over/column_gaming/ (originally posted March 28, 2002). For the 6.3 million figure, see http://www.shacknews.com/docs/press/032402_sims.x (accessed October 13, 2010).
3. The pricing scheme is described in Nicholas K. Geranios, "Surge in Game's Sales No Myst-ery," in the technology@ugusta section of *Augusta Chronicle Online*, Web posted January 27, 1997, at http://www.augustachronicle.com/stories/012797/tech_myst.html.
4. Sales figures are from a search of Amazon.com and eBay done on February 18, 2004.

MYST AND THE ADVENTURE GAME GENRE

1. Mark J. P. Wolf, *The Medium of the Video Game* (Austin: University of Texas Press, 2001), 118–19.
2. The history of *Colossal Cave Adventure* and its various versions can be found at http://www.rickadams.org/adventure/a_history.html (accessed October 13, 2010).
3. On the connection of the game and the actual cave on which it is based, see http://www.rickadams.org/adventure/b_cave.html (accessed October 13, 2010).
4. For a history of interactive fiction, see <http://www.inform-fiction.org/manual/html/s46.html>.
5. For an in-depth look at the problems encountered in adapting *Adventure* into a graphical game, see Robinett's foreword in Mark J. P. Wolf and Bernard Perron, eds., *The Video Game Theory Reader* (New York: Routledge, 2003).
6. According to http://www.atariage.com/software_page.html?SoftwareLabelID=1 (accessed October 13, 2010).

7. E-mail from Warren Robinett to the author, March 22, 2004.
8. From the LucasFilm Games manual to *Maniac Mansion*, 1987.
9. Video clips had been used in laserdisc games as early as *Astron Belt* (1982) and *Dragon's Lair* (1983), and even in Rick Dyer's Halcyon home laserdisc game system, but the amount of memory needed to store video clips was not available in home computers until the advent of the CD-ROM.
10. For a description of the video game industry around late summer 1993 and the rise of CD-ROM-based games, see Dean Takahashi, "Playing for Billions No Longer Just Kids' Stuff, Video Games Go Hollywood," *Los Angeles Times* (Orange County Edition), August 1, 1993.
11. Heidi Fournier, "The 7th Guest, Review," March 13, 2003, available at <http://www.adventuregamers.com/display.php?id=3> (accessed October 13, 2010).
12. The Myst Island Recreation Initiative (MIRI) FAQ webpage can be found at <http://www.freewebs.com/mystiri/faq.htm> (accessed October 13, 2010).

EARLY WORKS OF THE MILLER BROTHERS

1. According to Richard A. Watson of Cyan, in an e-mail to the author, September 17, 2004.
2. See Watson's page "Welcome to Spelunx!" at <http://cho.cyan.com/rawa/spelunx.html> (accessed October 13, 2010).
3. Even the later versions of these games were small compared to the CD-ROM's capacity: version 1.2 of *Cosmic Osmo* was only 83.2 megabytes, with the remaining space used for 43:41 minutes of music; and *The Manhole Masterpiece Edition* was only 202.3 megabytes, accompanied by 32:21 minutes of music.
4. According to Richard A. Watson, from e-mail sent to the author, April 16, 2004.
5. Richard Kadrey, *From Myst to Riven: The Creations and Inspirations* (New York: Hyperion), 82–83.

THE WORLD OF MYST

1. According to Richard A. Watson,

There were things in the original *Myst* that were "cheated" that worked fine in the pre-rendered stills environment but didn't work as well in the real-time environment. There is just a different "feel" to the environment when you are moving around it in real-time, and a better sense of scale.

Everything in *realMYST* had to be remodeled and retextured anyway to work efficiently in the real-time 3D engine. As everything was remodeled, the intent was to keep the "feel" of *Myst* Island as close as possible to the original while making the changes necessary for the environment to hold up in real-time.

E-mail from Richard A. Watson to the author, June 9, 2004.

2. I am aware of the debate regarding the use of the term *interactive* when writing about video games, and what exactly constitutes true interactivity, but I will use it here as it is used in common parlance, to indicate the pointing, clicking, and keyboarding that the player does during gameplay.
3. While the images could have been deliberately designed to withhold views of the tree elevator, a more practical reason for this structuring absence could be the pre-ren-

dered views themselves. Since the tree elevator can be at several different positions or states, and move between these states, a greater number of pre-rendered views and animations would have been needed if the tree elevator could be seen from other locations. As the game is, the elevator can only be seen moving if you are standing in front of it.

4. A simple algorithm solves the problem for most of the numbers between 1 and 99: take the total you are trying to reach and subtract the largest number possible (starting with 22), and continue subtracting the next smallest number that fits (19, 16, 10, etc.) until the total is reached. The only numbers this will not work for are 14, 26, 36, 45, 55, 61, 71, 80, and 88 (these numbers can still be easily reached, however), and 4 and 95, which cannot be reached at all.

5. E-mail from Richard A. Watson to the author, September 17, 2004.

6. Ibid.

7. E-mail from Richard A. Watson to the author, February 25, 2004.

8. Rand and Robyn Miller with David Wingrove, *Myst: The Book of Atrus* (New York: Hyperion, 1995), 129. Another such description appears on page 253.

9. There are indirect answers to the problem, however. For example, page 161 of *Myst: The Book of Atrus* mentions “specialized books” used by the Guild for the harvest worlds, which were “much less restrictive than ordinary books” and could “take the great loads that were regularly brought back from those Ages.”

BEYOND THE GAME

1. All figures regarding file sizes are from the Macintosh versions of the programs.

2. E-mail sent from Richard A. Watson to the Riven Spoiler Lyst, on December 1, 1998. The e-mail was posted at <http://www.dnidesk.com/rawabod.html>, where I accessed it on August 16, 2004.

FROM MYST TO RIVEN

1. J. R. R. Tolkien, “On Fairy-Stories,” in *Tree and Leaf* (London: Unwin Books, 1964), 25.

2. Although in *Riven* it is capitalized and used as a name, *moiety* is an English word meaning one of two parts into which something is divided, suggesting that the people of the Age are riven (split in two) as well as the actual physical age itself.

3. An excellent collection of *Riven* details that one could easily miss in the game, as well as Easter eggs and mistakes, can be found at Stewart Bradford’s *Riven Illuminated* website (http://www.geocities.com/p_aarli/main.html).

4. The tear was pointed out in Stewart Bradford’s *Riven Illuminated* website, http://www.geocities.com/p_aarli/233.html (accessed August 6, 2004).

5. The *Myst IV: Revelation* website was at <http://www.mystrevelation.com/us/index.html> as of September 22, 2004.

THE WORLD OF RIVEN

1. According to an e-mail from Richard A. Watson to the author, September 17, 2004,

As with *Myst*, the user’s manual for *Riven* was done by the publisher. They wanted to use the animal icons to decorate the user’s manual. We were afraid

that they'd give away the solution to the animal puzzle, and told them so. They assured us that they wouldn't give anything away. Apparently, that got translated somewhere along the line as "don't use the icons from the animal puzzle," so . . . all of the animals are used *except* for the five used in the animal puzzle's solution. So if someone pays close enough attention, seeing which icons are missing will tell them which animals to use. So much for "not giving anything away . . ."

2. All the journals of *Riven* and transcripts of spoken monologues were found at *The D'ni Desk Reference* website, at <http://www.dnidesk.com>, which is no longer available.

3. One could also ask how the underground city of the D'ni dealt with sewage. I suppose there could have been something like "bathroom Ages," which the D'ni could have linked to whenever needed.

Regarding the Sunner outline, Richard A. Watson writes,

Story-wise, at one time there was an outline for the Sunner in the jungle where the Sunner's eye is seen. The outline was destroyed by a fallen tree. Gameplay-wise, it's to give the animal puzzle a little variety. Three of the animals can be identified by either shape or sound, so they're the easiest. One (the fish) is a little harder, as it can only be identified by sight. One (the Sunner) is a littler harder, as it can only be identified by sound (which requires you to figure out how to approach the Sunners slowly to get close enough to hear what sound they make.)

E-mail from Richard A. Watson to the author, September 17, 2004.

4. Regarding the hidden button that opens the wahrk totem's mouth, Richard A. Watson writes,

People ask why we put something as arbitrary as the tiny secret button on the top of the lamp there to open the wahrk statue, since "random little click hunts" are not what our puzzles usually are. In fact, the player was not intended to find that until *after* they'd come from the other side (Garden Island) where you see that little peg standing up and going down when you come out of the wahrk statue. That's one of the drawbacks of not forcing the player to do things in a certain order (whenever we can).

E-mail from Richard A. Watson to the author, September 17, 2004.

5. My speculation that *wahrk* came from *whale* and *shark* proved to be correct. Richard A. Watson confirmed this in an e-mail:

Yes. "Whark" was our temporary name for the creature and it stuck (as most of our "temporary" names end up doing). The problem is that it was supposed to be a D'ni word and "wh" is not a D'ni consonant combination, so the official spelling was changed so that it reflected how the D'ni (Gehn) would have spelled it (even though he's the one that misspelled it in his journal).

E-mail from Richard A. Watson to the author, September 17, 2004.

6. E-mail from Richard A. Watson to the author, September 17, 2004. Watson must be referring to the hardcover edition of *The Book of Atrus*, as the passage he describes comes later than page 123 in the paperback edition that I have.

7. Commenting on this, Richard A. Watson writes,

This is one of the biggest exceptions to our standard that things should work like in real life (at least as closely as we can). In real life, it doesn't make sense that the combination is set when Gehn is captured. If you were really there, you'd obvi-

ously be able to open it by trying every possible combination even before Gehn was captured. Unfortunately, letting Catherine out before trapping Gehn opened up too many possibilities, and would have required even more endings (the biggest problem with that being all of the live filming that was required) than we already had, so we had to make sure that Catherine could not be released until Gehn was captured.

E-mail from Richard A. Watson to the author, September 17, 2004.

RIVEN'S FORTUNES AND THE REST OF THE MYST SERIES

1. According to the market research firm PC Data, and quoted in Robert Scally, "PC, Video Game Software Sales Hit Record High in 1997," *Discount Store News*, March 9, 1998, available at http://www.findarticles.com/p/articles/mi_m3092/is_n5_v37/ai_20403678 and accessed October 13, 2010.

2. The figure of one million for *Riven* sales comes from *The Motley Fool's* stock report for Brøderbund Software, Tuesday, June 16, 1998, available at <http://www.fool.com/Dtrouble980616.htm> and accessed August 23, 2004.

3. According to a figure from Cyan, reported in an e-mail from Richard A. Watson to the author, August 27, 2004.

MYST'S AND RIVEN'S INFLUENCE ON THE ADVENTURE GAME GENRE

1. *Just Adventure +* is at www.justadventure.com. The categories into which the site divides all adventure games are 3-D, Adventure, Adventure/Action, Adventure/ARG, Adventure/Children, Adventure/Console Game, Adventure/Puzzle, Adventure/RPG, Adventure/Text, Casual Game, Episodic Games, Fantasy, Full Motion Video (FMV), Historical, Horror, Humor, Keyboard, Match-3 Game, MMOG, MMORPG, Myst-like, Mystery, Point & Click, Puzzle-Solving, Science Fiction (Sci-Fi), and Strategy. Most games on the list appear in multiple categories, and some of these categories, like "3-D" and "Point & Click," seem to include *Myst* and other games like it. Oddly, other games like *Aura* (2004) and even *Myst III: Exile* (2001) which should be included in the "Myst-like" category are not.

2. Other *Myst*-like games appearing after 1997 include *Morpheus* (1998), *The Castle* (1998), *Celtica* (1998), *Liath* (1998), *Time Warrior: The Armageddon Device* (1998), *Qin: Tomb of the Middle Kingdom* (1998), *Reah: Face the Unknown* (1998), *Ring: The Legend of the Nibelungen* (1998), *Starship Titanic* (1998), *COMER* (1999), *The Forgotten: It Begins* (1999), *Inherent Evil: The Haunted Hotel* (1999), *Dracula Resurrection* (2000), *Traitor's Gate* (2000), *Xiama* (2000), *Adventure at the Chateau D'Or* (2001), *Dark Fall: The Journal* (2002) and its sequel *Dark Fall: Lights Out* (2004), *ALIDA* (2003), *Aura: Fate of the Ages* (2004), *Return to Mysterious Island* (2004) (inspired by *The Mysterious Island* by Jules Verne, the same novel that inspired *Myst* itself), the *Nancy Drew* series of adventure games (beginning with *Nancy Drew: Curse of Blackmoor Manor* [2004]), *Echo: Secrets of the Lost Cavern* (2005), and *Voyage* (2005).

Glossary

Achenar Atrus's son who appears in the blue book in the library on Myst Island. He appears to be insane, and his rooms in the various Ages are usually in disarray, with an air of darkness and feral evil about them.

Age The world that is described in a Descriptive Book and linked to with a linking book. Each Age is a small world that corresponds to the description written in its respective book. Most of the Ages in *Myst* and *Riven* are islands, and each is a separate world that can only be reached through the use of linking books.

Atrus The father figure in *Myst* who narrates the opening sequence (about how he lost the Myst book that the player uses to get to Myst Island), and whose sons have been imprisoned in Ages reached by the red and blue books in the library on Myst Island. Atrus also is the son of Gehn, and appears in *Riven*, and is the character who interacts the most with the implied player-character in both games.

cannen A music recorder found in Gehn's office.

Catherine Atrus's wife, and the mother of Achenar and Sirrus. Catherine does not appear in *Myst*, but in *Riven* she is imprisoned by Gehn on Riven, and rescuing her is one of the player's goals. In the *Myst* novels, it is revealed that it was Catherine who wrote the Descriptive Book for *Myst*.

Descriptive Book The book in which is written (in the D'ni language) the description of a world that can be visited by means of linking books. The Descriptive Book is the founding link to a particular Age. Early on in the development of the *Myst* mythology, the writing of a Descriptive Book was said to create the world that it linked to, but after later adjustments to the mythology it was revealed that this was a misconception held by some of the characters (like Gehn), and that the books merely linked to preexisting worlds that matched the ones described in them. While this change does not greatly affect the mechanics of the stories or the games, it does make a difference in the underlying philosophy of the *Myst* mythology, bringing it more in line with a Christian worldview in which human beings are not able to create *ex nihilo*.

diegesis The world in which a story takes place, made up of everything that the characters who live in that world can experience. For example, the music played by musicians appearing in a film is said to be diegetic, and can be heard by the other characters in the film, while the film's soundtrack and credits, which the audience sees and hears but the characters cannot, is said to be nondiegetic.

- D'ni** Literally, “New Start.” The word refers to the culture that developed the Art of Writing the Descriptive Books that link to Ages, as well as to the great underground cavern in which they live.
- ex nihilo* creation** An act of creation that is literally “out of nothing,” as opposed to creation that uses existing forms, concepts, ideas, or materials. Only God’s creation can be said to be completely *ex nihilo*.
- Gehn** Atrus’s father and the main villain of *Riven*. Gehn is the D’ni who wrote the Riven Descriptive Book, and as such he passes himself off as a god to the villagers of Riven, scaring them and trying to subject them to his will.
- interactive fiction** Fiction in book or software form in which the reader’s decisions and choices influence the flow of the narrative or experience of the work. Although the use of the term varies, it usually refers to text-based fiction.
- linking books** Books that are smaller than Descriptive Books, and that contain the linking images that allow someone to travel to the world described in the Descriptive Book that is associated with the particular linking book being used. Linking books are also used to return to the place from which the traveler came. If a Descriptive Book is altered or destroyed, all linking books associated with that Descriptive Book are rendered useless.
- linking image** The image within a linking book, usually on the first page (on the right-hand side of an open book), onto which someone can place his or her hand and be transported to the world associated with that linking book. This is how the player-character gets to Myst and to Riven at the start of the games, and also how the player-character moves from one Age to another within the games.
- maral-obe** A musical instrument played by Gehn.
- ontological status** Ontology is the study of the nature of being, and ontological status is a determination of the state of a kind of being. Thus we would say that a fictional character has a different ontological status than a real person, or that a computer-generated object has a different ontological status than a real object.
- player-character** The main character of the game, whose point of view is ours when we play. The player-character is addressed directly by other characters in the game, but never seen, since everything is shown from the player-character’s point of view.
- Sirrus** Atrus’s son who appears in the red book in the library on Myst Island. He appears to be intelligent but shady, and his rooms in the various ages are usually ornate and orderly, but include sinister details (like syringes and the flag of the Black Ship).
- subcreation** A term coined by J. R. R. Tolkien to distinguish the creations made by human beings from God’s *ex nihilo* creation. Subcreation involves taking existing concepts or materials and combining them in new ways, and includes the building of an imaginary world, which involves a great deal of the process of invention.
- Sunners** Creatures lying on the beach on Village Island in Riven, who move into the water and swim away once the player-character approaches too closely. Their sound and shape are also part of the clues in *Riven*.

text adventures Adventure games that are mainly text-based, in which the environment and actions within the game's world are all described by means of text. Players interact with the world of the game by typing directional commands like "north" or "up" to move, and other actions like "use key" or "open door." Text adventures can be seen as part of the much larger category of Interactive Fiction.

verisimilitude The appearance of truth or something that appears to be true or real; often used to describe fictional works or worlds that succeed in conveying a realistic setting, appearance, or feeling.

wahrk A marine animal in *Riven* whose name is a combination of the words *whale* and *shark*.

ytram A small, froglike animal found underground on Book Assembly Island. The name comes from the name "Marty" spelled backwards.

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