13. Inviting Subversion:

Metalepses and Tmesis in Rockstar Games' Grand Theft Auto Series

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The Grand Theft Auto (GTA) series has grown in its ability to confound virtual and real by willfully extending to its user the privileged position of coauthor. Starting as early as the original two-dimensional *Grand Theft Auto*, the series invited gamers to play in an open-ended world where they were free to ignore the game designers' set narratives and, perhaps, simply use the game to go for a virtual Sunday drive. With *Grand Theft Auto III*'s (*GTA3*) move to three-dimensional cyberspace, Rockstar Games' web of connections between its open-ended gameplay with the "real world" institutions of the Internet, film, print, and even other video games grew, consistently making reference to these other media, often quite explicitly. This game borrowed heavily from gangster and "'hood" genres to create what amount to interactive movies (Murray 91). Users explored every nook of *GTA3*, including portions of the game that its designers clearly did not expect to be found.

The designers of Grand Theft Auto anticipated users who would be appreciative not only with these references outside of the game proper, but who would also be savvy enough to rip and replace each game's zeroes and ones. Designers provided interfaces for these users to inject personal touches, from the design of the jacket that appeared on the hero's back to the choice of what songs would be played on the in-game radio. Users were even allowed to insert vehicles and buildings of their own creation into the game. As they added the hooks for this sort of user-created content, Grand Theft Auto's designers provided new outlets for

interacting with those users who were no longer limited to a simple phenomenological interaction with the virtual worlds the games created. The groups' interactions and ability to coauthor the game they shared now extended to the digital foundations of Grand Theft Auto's virtual worlds.

Grand Theft Auto: San Andreas (*GTA:SA*) took the lessons learned from the two earlier games in the Grand Theft Auto series as givens. In this game, the designers counted on the capacities users had exhibited in and learned from the earlier games. Users' skills allowed them to uncover content that would never be experienced playing the game "by the book." A few clever hackers found a sexually explicit minigame, popularly dubbed "Hot Coffee," hidden in *GTA:SA*, a minigame whose discovery required the use of highly subversive technical explorations into the game's software code.

It is the goal of this study to trace how Rockstar's Grand Theft Auto series' designers and users have negotiated their way to a more nuanced dialog, and to offer some explanation why designers have chosen to potentially give up so much of their creative control to their users. In order to do so, a number of concepts from the fields of game design and literary theory will be explored in the hopes of creating an informed, multidisciplinary approach for reading the Grand Theft Auto series.

Metaleptic Training

Grand Theft Auto's mediation of the dialog between users and its designers is most striking in its careful usage of what Gérard Genette terms "metalepses." Metalepses takes place when there is a "transition from one narrative level to another" (234). Using Todorov's example of *Thousand and One Nights*, Genette demonstrates an extreme case of narrative levels, where, in one story, "Scheherazade tells that ... Jaafer tells that ... the tailor tells that ... the barber tells that ... his brother (and he has six brothers) tells that..." (214n4), easily indicating five degrees of narration. When the frame of one level of narration is broached by actions from another, if the barber's actions were affecting Jaafer, for example, the breech causes the collapse of the "shifting but sacred frontier between two worlds, the world in which one tells, [and] the world of which one tells" (236), and metalepses occurs.

Genette provides several illustrative examples. He quotes the forced inclusion of the reader with the use of second-person and plural, first-person possessive pronouns as the narrator of Diderot's *Jacques le fataliste* says, "If it gives you pleasure, *let us set* the peasant girl back in the

saddle behind her escort, *let us let* them go..." as if the reader's wishes could change the course of the action already written (234). Genette later cites Balzac, whose narrator remarks, "While the venerable churchman climbs the ramps of Angoulême, it is not useless to explain..." though there is obviously no literal lull to be filled while the character is climbing; the book is already printed, sitting in the reader's hands (235).

Espen Aarseth uses Genette's description of metalepses to describe what happens in the Interactive Fiction work *Deadline*. Here, a player finds a book that claims to contain what amounts to a finished transcript of the adventure the user is concurrently experiencing, a transcript they continue to cocreate as they type the action "read book." If a user does choose to read the book, the game forces the user's avatar to kill themselves, apparently out of the depression caused by learning the narrative's Mobius-like outcome—namely that the avatar learns that it will commit suicide!

The Grand Theft Auto series is not, then, unique among digital games in that it is comfortable with metalepses. The concept has been a central force in video games since *Adventure*—both in Crowther and Woods' seminal work of *Interactive Fiction* and in Warren Robinett's game by the same name for the Atari 2600. In Crowther and Woods' *Adventure*, the player can happen onto the game's characters "sleeping like uninitialized variables" (Montfort 90), a description that belies their digital makeup. Robinett's contains a hidden message for gamers, clearly *not* for their avatars, now famous as the first Easter egg in a video game. In the first, the user's separation from the digital nature of the game's characters is stripped, eliminating the narrative distance between the game's code, effectively the game's narrator, and its user's world. In the second, Robinett's digital narrator ignores the conventions of the medieval fantasy being told and directly addresses the user, not unlike what transpires in Ginette's quote from Diderot.

What makes Rockstar Games' Grand Theft Auto fundamentally different is the level of comfort and play metalepses is afforded. There are what would seem to be dummy websites for virtual businesses advertised on the in-game radio, like PetsOvernight.com. This appearance is problematized for users that discover that these sites can be found online, in "real cyberspace," the game's narrative space collapses with that of the users. Similarly, there is also a ticker at the virtual airport in *Grand Theft Auto III* that, upon close inspection, is found to list a web address for game hints. The music playing on the in-game radios are, for *GTA:VC* and *GTA:SA*, tracks from artists that were popular in the time those games were set. That is, except when the music is from the user's

own mp3 collection, which, on the version of *GTA:SA* for Microsoft Windows, can be added to a particular folder and played between the DJ's comments. Of course, the music playing in the user's own, "real" car could be coming from one of the fifteen soundtrack CDs that contain the tracks from the in-game music found in the two most recent games in the series, further blurring the "sacred frontier" between virtual narrative and real life. And what if someone who plays one of the games in the series "really" steals a car from a driver listening to one of the games' soundtracks?

In all, *Grand Theft Auto*'s metaleptic play conjures the "uneasiness Borges so well put[s] his finger on: 'Such inversions suggest that if the characters in a story can be readers or spectators, then we, their readers or spectators, can be fictitious'" (Genette 236).

Designer-Sanctioned User Authorship

It is essential to understand Rockstar's use of metalepses to realize that their encouragement of users' subversion of the game's code, its very medium, is no accident. This is particularly obvious with the versions of Grand Theft Auto that play on personal computers running the Windows operating system. Here, players so disposed may quickly learn to modify the game by inserting textures and models that create new vehicles, weapons, even new clothing and building façades. That Rockstar has made hacking the series not only possible, but a relatively simple affair, shows their willingness and desire for gamers to coauthor more than merely the plot of what is already one of the most open, free-flowing game experiences available to date, including its digital content.

There are a number of ways for an anonymous third party to change the conventionally static content of a video game, and one system of classification is to categorize them based on the level of expertise required for each content type's creation. At the simplest level, there are skins. Skins afford players the most straightforward route for personalizing their game experience beyond textual contributions, like avatar names and chat text. The term "skin" comes from games with three-dimensional representational systems. Though the game is displayed on a two-dimensional screen, the game engine does keep track of each object in three-dimensional space. The objects are kept in memory as models made up from vectors, essentially wire frames or skeletons, and each model has a number of animations that it can perform. Some games, notably some later versions of *Descent*, took advantage of the vector-based system and created displays that would appear three-

dimensional with specialized glasses. A skin, nothing more than a simple two-dimensional raster image, is draped over the model or skeleton to create, for example, the player's marine in id software's *Quake 1*, the game primarily responsible for introducing gamers to the concept of malleable, interchangeable skins. Altering an object's skin can be accomplished using any image editing software that understands the image format used by the game engine. In *Quake 1*'s case this is .pcx and Grand Theft Auto utilizes .tga, both of which can be translated into a standard bitmap using a number of freeware utilities before being edited in something as simple as Microsoft Paint, a utility bundled with the Windows operating system.

Two-dimensional game engines, like those of the original *Doom* or *Super Mario Brothers*, do not use wire-frame models but flat sprites. The skin logic holds, however. Editing the image that is "placed" on the flat sprite changes the object's appearance. Examples of hacks of two-dimensional games that include sprite-skinning range from the simple hacks listed at I-Mockery.com's "Hacked ROM Reviews" page to Cory Arcangel's complicated total conversion of *Super Mario Brothers* into a fifteen-minute movie, created by using *Super Mario Brothers*' graphics and sounds, the result of which can be viewed only through a Nintendo Entertainment System console or an emulator.

To create or change a skin, then, a hacker need only locate the skin to edit in a game's content, open it in image editing software, make their edits, and then replace the original image. This sort of hack is limited, as the attempts to create female skins designed for the very stereotypically male model, or skeleton, of the marine in *Quake 1*, show (Pomaville). The simple process is, however, also very powerful, and third-party skinners have taken to inserting customized objects into *Grand Theft Auto: San Andreas*, from Tupac Shakur shirts (LaoBoy) to Federal Express and Krispy Kreme trucks (JD 'GunMod'), even a new look for a car dealership (SimonS).

The three-dimensional skeleton of an in-game object is called its model. Modeling requires more expertise and specialized, sometimes quite expensive, software, and is not a task for the casual hacker. New models have been created for *Grand Theft Auto: San Andreas*, including vehicles as varied as the Batmobile from the movie *Batman Begins* (DieselGT) to an easily recognizable Toyota FJ40 (Todd587), as well as new weapons, like a Thompson machine gun (Blue Zircon). An easy to follow example of how to create and skin a new model can be found in Jonn Gordon's "3D Modeling and Animation" site, where he shows how the Marvel Comics character Wolverine was created and placed into *X-Men: Ravages of the Apocalypse*, a commercial game that was built atop the

Quake 1 engine. Rather than simply creating a skin and placing it on an existing panel truck, burly marine, or car dealership building, both the *GTA:SA* modelers and Gordon first created new wire-frame skeletons, animations for each of the actions the games' engines supported for their models, and customized skins designed to fit on the models made for each new object or character. To insert the newly created models, like skins, one must know the location where the game engine expects to find it and place the new files in that location.

Maps—in essence the geographical limits of the worlds created by games—are created in a method similar to any other object. In 3D games, worlds are modeled with wire-frames made up of vectors covered with raster textures, much like skins. The re-textured used car dealership in *Grand Theft Auto: San Andreas* is one example of how world maps closely parallel models.[1] Though the world maps generally do not have the same granularity as high-resolution avatar models, mainly in the interest of quicker authoring times and lower hardware requirements for rendering, similar skills are required for their creation.

The Grand Theft Auto series exposes each of these avenues for user self-expression, from skins to models to maps. Though the amount of time and knowledge needed to create vast changes in the virtual Grand Theft Auto worlds are difficult to come by, the games' designers have seen fan art and objects produced for their past works and have done nothing to discourage such additions in their last two releases. The games invite users to participate in the creation of their experience, and the digital doorways for customization discussed here are natural outgrowths of the open-ended approach the original Grand Theft Auto games exhibited in their nonlinear, open-ended plots.

Eggs and Coffee

Most importantly for understanding "Hot Coffee" is the consideration of Easter eggs, which occur when a designer hides a message or some other metaleptic object addressed specifically to the player that can be discovered from within the game's interface, if only through somewhat dissident play. As a recent example, Microsoft used an Easter egg as part of a marketing campaign for their Origami project, a new platform for portable tablet personal computers. Part of the strategy was to build interest by withholding information, giving only teasers on the project's web site. The site originally only contained an animation that stated questions including, "do you know me? do you know what I can do?" ("hello"). The first hard evidence about what was going on came a week

later when a second page was added. This page had a similarly cryptic animation that displayed several landscapes. Within the HTML code for the web page, something most web surfers would never access, was a telling Easter egg that stated, "Origami Project: the Mobile PC running Windows XP" ("hi there"). About a week later, Microsoft and Origami project partners introduced the beneficiary of the strange, Easter egg driven marketing campaign at a conference that centers on discussions of computing hardware.

Easter eggs are not exclusive to digital works, though in print they are much more difficult to create and mediate with the control provided by digital media. Regardless, *UFO 54–40*, the twelfth book from the popular 1980s children's series Choose Your Own Adventure, contains a remarkable print example that serves well as a heuristic entry point for reconsidering the structure of Easter eggs. Though the books of the Choose Your Own Adventure series were distributed as traditional printed texts, bound into codices as any conformist book, the method by which they are intended to be read involves processes much like that used to approach hypertexts found on the Internet. This method emphasizes traversing nonlinear but finite linkages between textual units.

A Choose Your Own Adventure work initially operates like any other book, with its narrative starting on its first page. The clearest indication that the story will not read as other texts is in its quick implication of its reader *as a character* in the book. *Inside UFO 54–40*, for instance, opens with, "It's your first trip on the Concorde..." (Packard 1). The reader's metaleptic participation is not an option; the metalepsis occurs with the text's second word, though the author obviously has no control over who reads the book. The series' texts are broken up into units through the use of demarcations that separate narration from instruction, found at the bottom of some of the stories' pages. The second page of *Inside UFO 54–40*, for example, says, at the bottom of the page below a solid line, "*Turn to page 6.*"

Some of these textual units end with instructions that provide branches or choices. The reader is to select a single direction from the finite list before turning to the page indicated for the corresponding choice, much like a hypertext. As Aarseth remarks, nonlinear hypertext systems that mirror this selection process do not necessarily provide less control than a codex written with the expectation of being read linearly.

A hypertext path with only one (unidirectional) link between text chunks is much more authoritarian and limiting than (say) a detective novel, in which the reader is free to read the ending at any time (Aarseth 47). In a hypertext, the location of the next unit of text[2] is hidden in the link's HTML code, and navigation to that page, beyond the user's

initial click, is mediated through a browser, but the parallel with Choose Your Own Adventure is a natural one. Both are authored with strict conventions in mind that attempt to control nonlinear readings.

Furthermore, even when a codex is intended to be approached in a conventional, linear fashion, an author is never able to control where their reader reads closely and where they only scan or quickly skip ahead, which is a phenomenon Barthes explains with his concept of tmesis, or "skipping." Barthes says that this linear yet variable reader is "on the one hand respecting and on the other hastening the episodes of the ritual (like a priest *gulping down* his Mass) ... the author cannot predict tmesis: he cannot choose to write *what will not be read*" (11), giving a well-deserved, hypertextual connotation to linear text.

Aarseth broadens the context of his consideration of tmesis to reincorporate the word's meaning as a method for cutting apart and splicing together words or concepts. In a multidirectional hypertext, as that found on most Internet web sites, the author can, as is argued here, force their reader to complete reading one section of text before clicking a link to proceed to the next. With any codex short of the most experimental, the content of every page of the system is immediately accessible as the book rests in its readers' hands. A hypertext system allows more stringent control precisely because such a system can hide the locations of the vast majority of its textual units. Viewing the initial page's HTML code only reveals the location to the pages reachable through the links that page contains. The total number of pages remains unknown.

Though such control is impossible in a multidirectional codex like Packard's, he takes advantage of this openness to embed a clever Easter egg. Throughout the book, one of the side plots is a quest to locate a place called Ultima, the "planet of paradise," which the book's preface unequivocally claims can be found, but that "no one can get there by making choices or following instructions!" (Packard "Special Warning!!!!") While flipping from one trail in the book to another, some readers may notice a two-page picture in the intermediate pages (102–3), the only such spread in the book. The page before the picture, page 101, clearly indicates that the picture straddling the next two pages is of Ultima.

Unfortunately there is no branch in the story that ever instructs the reader to turn to page 101 of *UFO 54–40*, and page 100 is a dead end; the reader is not supposed to continue from page 100 to the next page where Ultima is revealed. *UFO 54–50* takes advantage of the lack of authorial control within a codex, using page flipping as the interface for the Easter egg's discovery. Though technically no specialized tools are required to discover the pages containing Ultima, the reader does have

to resist and subvert the standard interface for accessing the work's content through the use of Aarseth's broadened definition of tmesis-as-cutting. A suspiciously similar reading is required to access *Grand Theft Auto: San Andreas'* hidden minigame, "Hot Coffee."

Hot Coffee and Possible Piltdowns

The skull planted in Piltdown, England may be the most successful of scientific hoaxes, and is certainly the greatest in physical anthropology. Little more than an orangutan jaw placed next to a human skull, the false fossil tricked anthropologists into considering a British human origin story for more than four decades. The Piltdown concept is a useful one for video games, especially when trying to evaluate authorial intent with respect to apparently fossilized content. Are programmers cunning enough to disguise Easter eggs in their games as fossil remnants from previous, unreleased versions of their software[3] in order to trick the gaming public into believing they were left there only as accidents? Rockstar's *Grand Theft Auto: San Andreas* raises just this question.

GTA:SA contains what appears to be just such a stranded fossil, a portion of the game that is inaccessible without some sort of hack or download. The "fossil" is a minigame that allows a gamer to have limited control over relatively graphic sexual scenes between CJ and his girlfriend(s). In *Grand Theft Auto: San Andreas*, CJ's current girlfriend may, at times, invite him into her house for coffee. Without the "Hot Coffee" modification, the girlfriend's house shudders much like CJ's car does when a prostitute enters. With the modification, the camera follows CJ inside the girlfriend's home and explicitly shows them having sex. There is a ludic element to the scene, and the user can control CJ's style of intercourse using the game's controller.

"Hot Coffee's" discoverer, Patrick Wildenborg, says the following about the modification he created to allow other uses to unlock the minigame on his website:

> After reading various discussion [sic] about this mod around the internet, I would like to make the following statement:
> *All the contents of this mod was already available on the original disks. Therefor [sic] the scriptcode, the models, the animations and the dialogs by the original voice-actors were all created by RockStar. The only thing I had to do to enable the mini-games was toggling a single bit in the main.scm file. (Of course it was not easy to find the correct bit)* [Wildenborg, emphasis original].[4]

Though Wildenborg discovered the minigame in the Windows version of *GTA:SA*, after his discovery others found the same content in ver-

sions for home gaming consoles as well, both on the Playstation 2 and Xbox.

After the discovery of "Hot Coffee," Rockstar very quickly became trapped in a lively controversy, with U.S. Senator Hillary Clinton calling for the Federal Trade Commission to investigate how the game received a "Mature" rating, which recommends its sale to people seventeen years old and older, and not an "Adults Only" rating. An "Adults Only" rating was later given to *GTA:SA* due to the apparent fossil discovery, the game was pulled from mass retailers' shelves, and Rockstar Games, *Grand Theft Auto: San Andreas'* publisher, lowered their company's earnings expectations. A revised version with the hidden "Hot Coffee" code removed was released in October of 2005 as a "special edition" for a number of gaming platforms.

Using a metaphor ultimately quite favorable for Rockstar, Rodney Walker, a Rockstar spokesman, likened fossilized content in computer software to portions of a painting that were later painted over.

> "An artist makes a painting, then doesn't like the first version and paints over the canvas with a new painting, right?" said Rodney Walker, a spokesman for Rockstar Games. "That's what happened here. Hackers on the Internet made a program that scratches the canvas to reveal an earlier draft of the game" [Schiesel].

While it is true that fossilized content can "reveal an earlier draft of [a] game," the metaphor is flawed due to Walker's inattention to the digital medium of *GTA:SA*. A copy of a painting does not include an embedded history. Owners will not discover a sketch of Mary with her left hand to her breast in their copies of mass-produced prints of Leonardo da Vinci's *Virgin of the Rocks*. Every copy of *GTA:SA* has the hidden sex game, and infrared reflectography is not required to discover the content ("The Hidden Leonardo"). It is also possible to erase unused code from a digital product's final version, whereas it is nearly impossible to remove an unfinished draft from below a masterpiece's last layers of paint. Walker's metaphor may have been one of the best of the quick attempts to understand the nature of "Hot Coffee," yet it is one that unjustly favors the publisher in its depiction that ignores digitalism.

Digitalism refers to the fact that computer code is made up of digits, and, as computers are currently implemented, specifically a binary system of zeroes and ones. Changing a "single bit," as Wildenborg remarks, means making the smallest modification possible to a binary file, either changing a single zero to a one or vice versa. With a hex editor, which will be described below, changing such a switch once the switch is found is as easy as changing a single letter in a document using a word

processor. When the "Hot Coffee" switch is off, *GTA:SA* plays as if the sexual minigame never existed. When the switch is on, the minigame acts in every way as if it were an integral part of the game's software. "Hot Coffee" could not be unlocked playing *GTA:SA* conventionally. The only way to access the minigame is to modify *GTA:SA*' files with an application external to the game.

Surprisingly, the process by which Wildenborg found the "single bit" that needed to be changed to unleash "Hot Coffee" may not have been quite as close to finding the proverbial needle in a haystack as he makes it sound. With the advantage of hindsight from his discovery and description above, it is relatively simple to hazard a guess to the approximate location of the switch that needed to be thrown to allow the *GTA:SA* engine[5] to access the "Hot Coffee" code.

Just as a text editor allows one to view the text in, for instance, an XML or HTML file, a hex editor allows someone to view the zeroes and ones in any binary file, though the numbers are displayed in hexadecimal shorthand.[6] Using a hex editor to view the "main.scm" file Wildenborg mentions, a key support file that seems to keep track of user preferences and other information in *GTA:SA*, allows a user to view precisely the same information the game's software processes. Though much of the information is an esoteric mess of seemingly random numbers, software designers often use the American Standard Code for Information Interchange (ASCII) format to store text in such files. Though in many ways it is easier for a computer to read numbers rather than text, these ASCII text "signposts" are useful mnemonics for the programmers, making the code slightly less machine readable but much more human friendly. *Grand Theft Auto: San Andreas*' main.scm file is full of such human-friendly signposts, and includes entries like, "TATTOO," "BARBER," "DEBT," and "VENDING_MACHINE." In one section of the file, there are a number of signposts that have the prefix "GF_" followed by "MEETING," "DATE," and "SEX," each followed by a number of "bits," mostly with values of zero in the main.scm file installed by the game by default. Changing one of the bits after the "GF_SEX," or "girlfriend sex," section may unlock the minigame. Now, when CJ reaches his girlfriends' houses, the bit that decides if the camera should follow him inside is switched on, and the sexually explicit content that was already contained elsewhere in the software is displayed.

Without a decent amount of trial and error, it is difficult to know for sure if the "GF_SEX" section represents the site where Wildenborg unlocked "Hot Coffee," but this is the method one would use to find where such a bit might exist. The ASCII signposts represent a virtual gold mine for users wishing to discover other ways to change their experience

of *GTA:SA*. Perhaps manipulating the bits in the "BARBER" section could unlock new hairstyles or the "VENDING_MACHINE" section could be changed to give CJ candy bars for free. Finding the hidden "Hot Coffee" section was less startling coincidence or the uncovering of a lost masterpiece than a simple matter of time. Had Wildenborg not performed his exercise in curiosity, eventually some technically savvy user would have unlocked the hidden feature in the Windows version of *GTA:SA*, and their finding would have then led others to unearth the existence of the minigame on millions of copies playing in home consoles across the world.

This method of reading the main.scm file is quite like reading a linear, conventional text. The file may have originally been scanned straight through, with particular attention being given once the reader come into contact with the "GF_" prefixed section, in which case Barthes' version of tmesis is a useful tool for understanding Wildenborg's process. If Wildenborg used the hex editor to search for particular ASCII text, like "SEX," Aarseth's tmesis-as-cutting is more appropriate.

What has changed in the move from printed text to New Media is not the method by which users are reading, but the manner by which they apply their willingness to disobey convention and read what authors never intended them to access. It is impossible to create a piece of software without authoring code for the computer to read and execute. Now those files are being accessed by humans as well, users who are gulping down files that designers, years ago, would have safely considered "*what will not be read.*"

Designer Motivations

The question is whether Rockstar, much in the same way Packard expected some readers to find the Ultima pages that fell outside of any track through *UFO 54–50*, anticipated users to find "Hot Coffee." In no small part because of the abundance of ASCII flags in the main.scm file, combined with the liberty with which users have been allowed to coauthor their experience in past Grand Theft Auto releases, it is a reasonably safe assumption to believe some designer, perhaps covertly, was confident "Hot Coffee" would be found. If the inclusion of "Hot Coffee" was intentional on any level, by one or more programmers, it shows a new sophistication on the part of game designers.

But what are their purposes? Why would any designer allow users to so easily and profoundly change the in-game world? Why would *GTA:SA* contain "Hot Coffee" when the inclusion could mean incurring

the disdain of politicians and the economic penalties that accompany an Adults-Only rating and parents' lawsuits?

Jerome McDonough's eighteen-month study of designers of three-dimensional virtual worlds and in-game, virtual anthropological observations of participants in one of those worlds, pseudonymed "CyberVille," offer some intriguing answers. McDonough is perhaps most interested in understanding how design decisions inscribe designers' conceptions of potential users into the medium of computer software. Anticipating the type of dialog—and learning—that has unambiguously occurred with users and designers of Grand Theft Auto, he remarks that, "the inscription of the user can be a point of negotiation between designers and the real users of the system, and may evolve over time" (867). He concludes, however, that designers' inscription, in spite of the continued negotiations, is one that will "form a singular vision of their users—an ideal type," (862) and is a process where, "The designers' own conceptions ... [result] in virtual environments designed by a white, middle-class culture and for a white, middle-class culture" (867).

It is in this context of oppression through inscription that McDonough unfortunately reads the motivations of the designers of CyberVille as they discuss adding scripting functionality to the software engine of their virtual world. Scripting allows users to contribute very small snippets of code that use the virtual reality engine as a host; users contribute code without having to invent a world from scratch and without having to become familiar with outrageously large codebases to do so. Adding scripting interfaces is very much like what Rockstar's designers did to allow user-generated models and skins. As a rule, scripting is meant to minimize the investment in the programming skills in general and knowledge of particular bodies of code in particular necessary to create change. Scripting interfaces allow users a safe place to play with the medium of virtual reality worlds, but at the same time creates the possibility of their accomplishing real work and powerful transformations of the system. By choosing scripting as the method for users to contribute to the gaming world and because of the cultural characteristics that stereotypically accompany those with programming skills, McDonough posits that, by offering scripting, "these designers may be unwittingly contributing towards the reproduction of white, masculine hegemony in the virtual environments they are creating" (866).

Parallels with Grand Theft Auto games, including "Hot Coffee," are easily made. Here too, a user has to be exceptionally technically savvy to first find the online forums where the "Hot Coffee" modification was discussed, follow the links to the sites that offered the download that enabled the minigame, download, and install it.[7] Manipulating skins is

also a comparatively complicated process for most computer users. Nonetheless, without moving works like Grand Theft Auto away from digital media, opening the software up to user modifications to create a space for true and equal coauthorship will continue to require having the same skills as the designers that who initially wrote the works. Authoring digital media *necessarily* creates a bias for users that are familiar with binary files. Scripting is an excellent, practical means of minimizing that bias.

Contrary to McDonough's claims, developers who extend invitations for coauthorship at the level of those found in Grand Theft Auto or CyberVille's scripting are doing their best to appeal to nontraditional programmers, starting with the fact that these scripters would be programming for "play," not profession. In one sense, the Grand Theft Auto designers have learned McDonough's lesson, providing more nonprogrammatic avenues for game coauthorship, like the ability to play a user's mp3 tracks on the in-game radio. "Hot Coffee" offers an extreme programmatic test case, where users are able to choose to unlock a significant alteration to their experience of the work that brings their phenomenological, in-game experience more in line with the game's cinematic relatives, and they do this unlocking literally by flipping the simplest of binary switches.

Conclusion

The Grand Theft Auto series shows digital scholars that programmers may now count on users to perform the sort of convention-breaking investigations that introduce tmesis to the medium of not only video games, but any binary file. It would seem likely that at least one of the game's designers knowingly counted on players to perform this sort of convention-breaking, tmesis-introducing investigations that they learned while coauthoring their experience over the course of the series' earlier titles. If so, "Hot Coffee" belies a new ingenuity on the part of programmers, who are now playing with established conventions like Easter and fossilized eggs to mask their software's intentions. "Hot Coffee's" hidden, controversial content manages to implicate the gamer every bit as much as the designer through forcing them to coauthor access to the minigame's material. More importantly, Grand Theft Auto has developed the idea of potential texts in ways unlike any other composition, and is uniquely experimenting with digital media in ways other designers are only beginning to understand.

Notes

1. With that said, I have not had first-hand experience of a user-developed map in the Grand Theft Auto series, and those that can be found online have not reached the level. RealGTA3 <http://www.realgta.net> appears to be the most popular, adding real cars, the Statue of Liberty, and a new bridge, among other additions. It is based on the Windows version of *Grand Theft Auto III*, the first of the three-dimensional Grand Theft Auto games.

2. Both Choose Your Own Adventure and common hypertexts include nontextual elements, of course. For the sake of simplicity, I am ignoring those in these cursory explanations.

3. A more thorough explanation of the concept of software fossils is developed in (Bailey).

4. Also interesting to note is that this text, once plainly presented on the home page of Wildenborg's website, can no longer be seen by the casual web surfer. Much like the hidden comment in the code of Microsoft's Origami marketing website, Wildenborg's message can only be read by viewing the source code of his site's front page, mirroring the method of his discovery of the "Hot Coffee" minigame inside of the *Grand Theft Auto: San Andreas* code.

5. A detailed exploration of the concepts of binary code and game engines can be found in (Bailey). Briefly, a game engine is the portion of the game that enforces in-game rules, from gravity to communication to hunger. It stands in contrast to, though it works in concert with, game content, which includes models or in-game music, as discussed earlier.

6. Hexadecimal notation is the use of numbers in base 16 (A,B,C,D,E,F are used for 10,11,12,13,14,15), where each digit represents a number from zero to sixteen, and takes up one-eighth of the space of zeroes and ones. The hexadecimal number EE would represent 1111111011111110 in base 2, a significant space savings.

7. This "technically savvy" unavoidably includes access to a computer and web access as well.

Works Cited

Adventure. Atari. Sunnydale: Atari, 1978.

Aarseth, Espen. *Cybertext*. Baltimore: Johns Hopkins UP, 1997.

Arcangel, Cory. "Super Mario Movie." 6 June 2005. *Cory's Web LOG*. 12 Aug 2005 <http://beigerecords.com/cory/Things_I_Made_in_2005/super_mario_movie.html>.

Bailey, Wm. Ruffin. "Hacks, Mods, Easter Eggs, and Fossils: Intentionality and Digitalism in the Video Game." *University of Florida Game Studies Conference: Playing the Past Proceedings.*

Barr, Roger ed. "Hacked Rom Reviews!" *I-Mockery.com*. 12 Aug 2005 <http://www.i-mockery.com/romhacks/>.

Barthes, Roland. *The Pleasure of Text*. Trans. Richard Miller. New York: Hill and Wang, 1975.

Blue Zircon. "Thompson 1928." 26 July 2005. *Gtagaming.com*. 12 Aug 2005 <http://www.gtagaming.com/pafiledb.php?action=file&id=1180>.

Descent. Parallax Software. Champaign: Parallax Software, 1995.

DieselGT. "'Tumbler' Batmobile." 17 July 2005. *Gtagaming.com*. 12 Aug 2005 <http://www.gtagaming.com/pafiledb.php?action=file&id=1130>.

Genette, Gèrard. *Narrative Discourse: An Essay in Method*. Trans. Jane E. Lewin. Ithaca: Cornell UP, 1980.

Gordon, Jonn. "3D Modeling and Animation." 12 Aug 2005 <http://www.zerogravity.com.au/>.

Grand Theft Auto: San Andreas. New York: Rockstar Games, 2005.

Grand Theft Auto III. New York: Rockstar Games, 2001.

"hello." 24 Feb 2006. *Origami Project*. 10 Mar 2006 <http://www.origamiproject.com/1/>.

"The Hidden Leonardo." *NG London/News & Features*. 2001. 12 Aug 2005 <http://www.nationalgallery.org.uk/collection/news/newsitems/leonardo/default.htm>.

"hi there." 3 Mar 2006. *Origami Project*. 2 Mar 2006. <http://www.origamiproject.com/2/>.

JD 'GunMod.' "High Res Realistic Delivery Trucks Info." 1 Jan 2006. *Grand Theft Auto Files*. 11 Mar 2006. <http://grandtheftauto.filefront.com/file/High_Res_Realistic_Delivery_Trucks;55929>.

LaoBoy, "Tupac Shirt." 1 Aug 2005. *Gtagaming.com*. 12 Aug 2005. <http://www.gtagaming.com/pafiledb.php?action=file&id=1207>.

McDonough, Jerome P. "Designer Selves: Construction of Technologically Mediated Identity within Graphical, Multiuser Virtual Environments." *Journal of the American Society for Information Science*. 50.10 (1999): 855–869.

Montfort, Nick. *Twisty Little Passages*. Cambridge: MIT P, 2003.

Murray, Soraya. "High Art/Low Life: The Art of Playing *Grand Theft Auto*." *PAJ: A Journal of Performance and Art*. 27.2 (2005): 91–98.

Packard, Edward. *Inside UFO 54–40*. Toronto: Bantam, 1982.

Pomaville, Leann, ed. *Quake Woman's Forum*. 1999. *PlanetQuake.com*. 11 Aug 2005 <http://qwf.planetquake.gamespy.com/qskins/skinpac0.html>.

Quake I. Santa Monica: MacPlay, 1996.

Schiesel, Seth. "Video Game Known for Violence Lands in Rating Trouble Over Sex." *The New York Times*. 21 July 2005, late ed.:A1.

SimonS. "Johnson Autos." 28 June 2005. *Gtagaming.com*. 12 Aug 2005. <http://www.gtagaming.com/pafiledb.php?action=file&id=1033>.

Todd587. "Toyota Landcruiser FJ40." 15 Jun 2004. *deviantART*. 12 Mar 2006. <http://www.deviantart.com/deviation/8141143>.

Wildenborg, Patrick. "PatrickW GTA-Modding | Home." 12 Aug 2005. *PatrickW GTA Modding*. July 2005. <http://patrickw.gtagames.nl/index.html>.

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For Beth and Winton

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