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Mapping Metroid: Narrative, Space, and Other M

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Abstract

Metroid: Other M, the latest game in the *Metroid* series, was heavily criticized for the contradictory portrayal of its avatar-protagonist, Samus Aran. This paper analyzes these critiques within the twenty-five year history of the *Metroid* series, noting intersections with literary theory, cognitive science, geography, and cinema. "Mapping *Metroid*" argues that player dissatisfaction is a result of *Other M*'s inconsistency in balancing gameplay constraints with player agency, and the game's failure at "imperative" storytelling. The maps in *Other M* and its predecessors are treated in depth, since the relationship between cartographic and gameworld spaces must be "read" dynamically by players to progress; these maps reflect the affordances of each game, and how those affordances contribute to player enjoyment or frustration. The paper concludes with the suggestion that paying attention to signifying spaces may help design better games, and help situate video games within a wider discussion of theories of postmodern subjectivity.

Keywords: Metroid, Other M, narrativity, imperative storytelling, cognitive mapping

Mapping *Metroid*: Narrative, Space, and *Other M*

When *Metroid: Other M* (Team Ninja, 2010) was released on the Nintendo Wii, it got

mixed reactions from fans and critics. *Other M* diverged from the first-person gameplay that had

distinguished the *Metroid* series for much of the 2000s, returning to the third-person perspective

of earlier games with a more "arcade" feel. More significantly, the player-avatar protagonist,

Samus Aran, was made to speak for the first time since her appearance in the original *Metroid*

(Nintendo R&D1, 1986). Many fans saw this as a betrayal of the character, especially since

Samus – in earlier games an autonomous bounty hunter – was now taking orders from a

patronizing new character, Adam Malkovich. But if *Metroid: Other M* appeared to stumble on

the narrative level, an analysis of why – and in what specific ways – it did so might better help us

to understand why earlier *Metroid* games were seen as great successes.

Metroid's mapping system, this paper will argue, is the key. Understanding how that

system's affordances are constructed in different *Metroid* installments is central to understanding

how each game approaches storytelling. In the first section, I will situate this analysis with

certain recent examinations of "narrativity" and space in games, specifically those outlined by

Marie-Laure Ryan and Steffen Walz; in particular, I will use a theory of "imperative

storytelling" as an interpretative framework that, working within these and other examinations,

can be particularly instructive for the analysis of certain video game genres. I will go on to

explain the successes of the *Metroid* series in the second section, and to analyze the problems

associated with *Other M* in the third section, in both cases using an imperative storytelling

approach. The final section will draw parallels between successful imperative storytelling and

the processes of cognitive mapping that are felt to be integral to subjectivity in theories of

postmodernism. This quasi-cartographic focus can in turn help to theorize more broadly a way of

decoding game objects and spaces (at least in the puzzle/action-adventure game genre[1]) which

would serve two purposes: first, to improve design practices; and second, to articulate how

games are uniquely situated as a medium to model contemporary life.

Narrative, Space and Video Games

Metroid: Other M has a relatively detailed "plot," told via cinematic cutscenes that

features dialogue between identifiable characters; however, it is an outlier in the series, as most

of the previous *Metroid* games have far less in-game storytelling in the conventional sense.

Indeed, the lack in many video games of anything more than a simple scenario recounted in an

instruction manual is what has historically led some critics to question the storytelling

significance of games in general. But things are perhaps more complicated, and a nuanced view

of how we should evaluate the storytelling elements in video games can explain why earlier

Metroid games, despite having less "story" than *Other M*, nevertheless are felt to recount the

deeds of Samus Aran in a more coherent, satisfactory way.

In *Avatars of Story*, Marie-Laure Ryan proposes a scalar notion of "narrativity" that blurs

the boundaries between what constitutes a narrative and what does not; from this perspective, the

definition of a story "becomes an open series of concentric circles that spell increasingly narrow

conditions and that presuppose previously stated items, as we move from the outer to the inner

circles, and from marginal cases to the prototypes." (2006, p. 7) Ryan lists eight conditions of

narrativity, and these are grouped under four "dimensions": the spatial, temporal, mental, and

formal/pragmatic (p. 9). Her ultimate goal is to develop a medium-free theory of narrative, which

for Ryan means moving beyond the idea that stories are primarily verbal and instead realizing

that they are cognitive constructs. Furthermore, Ryan posits an open-ended list of narrative

modes, arranged predominantly as binaries of marked and unmarked terms; these include the

familiar fiction/non-fiction pair, as well as others that have added import for analysing the

narrative of games, such as scripted/emergent or representational/simulative. Thus even when a

video game, or other "new" medium, falls clearly within a narratologically unmarked category

(such as "simulation"), under this scheme it still demonstrates some narrativity or "storiness" –

what remains to be determined is the nature and the extent of that narrativity.

Steffen P. Walz's *Toward a Ludic Architecture* conducts a similarly expansive discussion

about games as such, comparing some of the main conceptual frameworks posited in games

studies research since the late 1990s. In a useful chart (2010, p. 118) he summarizes eight

"approaches" used by ludologists: these include the locative, representational, programmatic,

dramaturgical, typological, perspectivistic, qualitative, and form-functional/form-emotive. Later,

he attempts to subsume most of these approaches into a greater framework for analysing and

designing games, which he considers to be fundamentally constituted as kinetic human practices

in space. (pp. 131–132) It remains to be seen how successful this ambitious framework will be;

but Walz's schema is noteworthy because of its emphasis on space and because it sees such

concepts as "story" and "game" as theoretically-equal dimensions of a greater gamespace.

Implicit in both Ryan and Walz's views, I believe, is an assumption that the method and

approach to research on any particular game should be tailored to the genre of game and to the

purpose of the inquiry. For example, a "locative" approach to studying a game of hopscotch

would clearly be more fruitful than a technological approach, because its significance comes

more from the place and social space in which it is played (a neighbourhood sidewalk, a school

playground) than its equipment (a rock and some chalk). Similarly, a "programmatic" approach

to a rhythm game like *Guitar Hero* would reveal more than a "dramaturgical" one, as *Guitar

Hero*'s story is little more than a framing device. My use of a broadly narratological and semiotic

approach – particularly in keeping with Ryan's "narrativity" – should therefore not be seen as an argument that such a method represents an ideal, middle-ground method applicable to all games; it is instead one approach of many, but one which is best suited to a particular game or game-like practice.

In the sections that follow I propose to deploy concepts and analytical methods that seem best suited to understanding the *Metroid* games. These include, first, the representational or mimetic; this, in other words, is a semiotic approach that seeks to identify visual and auditory signs and decode their meaning, both within the confines of the game itself and with respect to the game's greater context. Second, there is what Walz terms the "dramaturgical" approach, or what we might recognize as narratology as such; this involves analysing the story and how it is told within the game, using categories developed for literary and cinema criticism, as these older media forms are commonly incorporated in many games, the *Metroid* series included. Finally, there is the "form-functional" approach, which seeks to understand how the functions of a particular game are spatially relayed.

Here the *Metroid* series presents some extra challenges, because it is a hybrid of action-adventure and puzzle games, and because games in the series have featured both two-dimensional and three-dimensional gamespaces – sometimes both within the same game. Approaches that privilege the non-representational spaces of role-playing video games (Huber, 2009), for example, can only be of limited use for *Metroid* games. On the other hand, approaches that privilege representational three-dimensional spaces downplay the importance of how two-dimensional spaces are still necessary to understand the primary gamespace. For instance, Michael Nitsche writes that, in the *Metroid* series, the "comprehensible multilayered interactive access enhances the depth of the game world as well as its dramatic structure" (Nitsche, 2008, p.

39); yet his analysis is limited to the movement and manipulation of objects in mimetic, 3D environments, explicitly ruling out other representational forms within the "mediated plane" such as the menus, databases, and procedurally-generated maps in the *Metroid* series and similar titles. Other examinations of space that recognize the importance of mapping focus on first-person shooters or God games (e.g. Günzel, 2007), only mentioning puzzle or adventure games in passing. (Günzel et al., 2010)

I have argued elsewhere (Arnott, 2012) that puzzle-based videogames signal their narrativity through a kind of "imperative mood," in which a game's design elements communicate to players what they must do in order to progress through the gamespace and actualize the game's story. At the most abstract level, designers recognize that similar object-based rhetorical principles underlie all games (Grenville & Johnson, 2008, p. 155; Anthropy & Clark, 2014). But puzzle games in particular can only "work" insofar as players figure out from their relative location, from signifying objects, and from their previous successful navigation of other gamespaces, where they must go and what they must do next. Such games that balance clear signification with challenging puzzles to decode are the most successful at achieving the affective "flow" (Csikszentmihalyi, 1990) that players seek, in which one's sense of time is distorted and self-consciousness gives way to immersion; flow occurs when the gamespace signifies clearly enough so that players avoid frustration, but with enough variety and complexity so that players do not get bored. In action-adventure/puzzle hybrids like *Metroid*, the spaces to explore are highly complex, requiring maps to help orient the player, which abstract the salient features of the virtual geography just as a conventional map simplifies (and necessarily distorts) "real" space.[2]

These maps must therefore be understood as spaces in their own right, similar to any other virtual space. Moreover, the mediated gamespace as a whole, and game maps as a subordinated representation of that whole, must be read together. An analytical approach that stresses that gamespace must be "read" in tandem with contextual cues such as maps, might help reveal how games in the *Metroid* series communicate to players how they must navigate the gameworld, and therefore how players must actualize the story-elements of the game.

The Evolution of the *Metroid* Series

Metroid (Nintendo R&D1, 1986) was a landmark of the eight-bit console era. This was not, however, thanks to its rudimentary scenario, which was the stuff of science fiction cliché: Samus Aran, interstellar bounty hunter, is on a mission to wipe out the lethal alien "Metroids" on the planet Zebes. The fact that Samus, the player-avatar, turns out to be a woman at the ending screen was a novel surprise, though hardly a triumph of feminist representational politics. What did make *Metroid* unique was its status as perhaps the "first open-world, non-linear platformer" (Bissell, 2010, p. 97), and it was a milestone of video game sound design thanks to its evocation of atmospheric sounds instead of harmonic music (Collins, 2008, p. 26). But *Metroid*'s gameplay also demonstrates an early example of deliberate spatial semiotics or imperative storytelling. Consider the very first screen: Samus materializes in a cavern, between two outcropping ledges (Figure 1). There is space to move off the screen both to the left and to the right. A player of 1986, only recently accustomed to side-scrolling games, which, like written English, proceeded from left to right, would likely go to the right instinctively. He may not realize he even has a choice. After a few screens, he will reach an area where the only way forward is a low tunnel which Samus cannot fit through; forced to double back, the player will eventually cross the starting area, where, just to the left, he will find the *mari maru* (the morph ball), an item that will

allow Samus to curl up into a ball and roll through narrow passageways, beginning with the one in the room to the far right. The solution to this simple first puzzle sets a precedent: linear gameplay is no longer a given in *Metroid*.

In this way, *Metroid* players quickly learn to read the geography of the gameworld in the context of what they have learned about it so far, and in the context of what abilities they have acquired. This process of continual learning as the defining aspect of the pleasures and frustrations of "level"-based gameplay would later be fruitfully explored from a cognitive science approach (Gee, 2003), and it is clear that *Metroid* serves as an archetype for this genre of gaming.[3] Yet learning to read *Metroid*'s gameworld often requires some trial and error. Tom Bissell recalls one childhood experience:

> One day my friend and I were playing *Metroid* in a desultory, pointless way, rolling ourselves into a morph ball and laying bundles of explosives charges because we liked the way the bombs launched us harmlessly into the air. But we made a strange discovery when, in an obscure part of the *Metroid* world, our bombs went off and part of the floor disappeared. This revealed a secret chute through which to fall and an entirely new part of the gameworld to explore. My friend and I were so happy we embraced. (Actually, I may have cried.) (2010, p. 97–98)

Through a similar process, players discover that the appearance of certain blocks can signify "bombable," "shootable," and so on, further informing the ways in which players interpret the objects of the gameworld and the Samus-avatar's relationship to them. Later, players also discover that some blocks on Zebes are false blocks that disguise either hidden

passages or pit traps. For the initiated, a seeming dead end occasionally signifies a secret, and this mode of signification has been a trademark of *Metroid* gameplay ever since.

However, *Metroid*'s semiotic repertoire has limitations. Different sectors of Zebes contain varying geographical features, but there is often either little continuity between rooms, or there is too much – some chambers are duplicated exactly. This makes it very easy to get lost, even for a player with a good memory. The only way for most to complete the game was to map out the world themselves (Figure 2), especially since *Metroid* has no mapping function built in.[4] So while *Metroid* could indicate through the design of its visual space what a player could or could not do within any *particular* room, it did not indicate what the next step might be on the scale of the entire gameworld. For instance, it is up to the player to figure out what new areas become accessible after Samus acquires an item like the hi-jump boots. Without a map marking the areas she had already been to, where previously insurmountable obstacles could now be overcome, this would require trial-and-error backtracking whose exponential possibilities could and often did lead to frustration.

The Game Boy sequel *Metroid II: Return of Samus* (Nintendo R&D1, 1991) followed a more comprehensible pattern in the design of its gameworld, with the gameplay structured as Samus' descent into the depths of the Metroids' home planet of SR388. The main shaft leading down is blocked by lava; it will recede only when Samus has cleared all the Metroids from the caves leading off from the branches, allowing her to descend further. Crucially, when the last Metroid in an area is destroyed, the screen shakes and the sound rumbles. The game design thereby signals to the player that the way is clear back at the main shaft. Although the areas branching off repeat their own patterns with the same graphic parsimony of the original *Metroid*,

they do so systematically, and this taproot-like layout of the world makes it possible for the

attentive player to read her surroundings and not get lost relative to the main cave.

In *Super Metroid* (Nintendo R&D1 & Intelligent Systems, 1994), released on the Super

NES, Samus returns to Zebes in pursuit of her archenemy Ridley and the last surviving Metroid.

Since this is nominally the same gameworld as the original *Metroid*, players are treated early on

to a visual and spatial allusion to the first game: Samus picks up the morph ball in a room

configured just like the one she found in *Metroid* (Figure 3, Figure 4).

However, this iteration of Zebes is far larger and more graphically detailed. There are

innovations such as more than one kind of breakable block, and doors that require different

weapons to open them. As in *Metroid*, these doors are color-coded: if a one is blue, that means it

can be opened with a blast from Samus' arm cannon; a red door, on the other hand, requires five

missiles. But when the *Metroid* veteran first comes across a heretofore unseen *green* door, this

signals "this door can only be opened by a new weapon"; it is only once the player acquires the

super missile, which opens these green doors, that the door comes to mean "super missile door."

Interpretation of the game environment builds upon the solution to each obstacle, based both on

experience from the two earlier *Metroids* and on the developments of *Super Metroid*. Later in the

game, Samus finds the X-ray scope, whose use, by revealing false walls and breakable blocks,

allows players a second order of gameworld interpretation: Zebes becomes a palimpsest to be

read on multiple layers.

The greatest change, however, is *Super Metroid*'s mapping system. Although Zebes's

geography is too complex to function satisfactorily with a *Metroid II*-style systematic layout,

Super Metroid introduces an automatic mapping function: as Samus traverses the world, her

progress is filled in on a map screen, and accessing "map rooms" allows her to download maps

of (some) areas she has yet to explore (Figure 5). Used on a console game for the first time in

Super Metroid, this has become a standard feature in most open-world games since. Crucially,

though, the maps are incomplete: only map rooms, save rooms, and energy and missile recharge

rooms are marked explicitly. Doors and other passages are not marked, and only the general

location of some items appears on the map. The maps in *Super Metroid* are therefore still

abstract enough that they require the player to read the space of the gameworld in tandem with

the mapped spaces, to cognitively transform the spaces from the conceptual to the

representational, if he or she is to progress. This also accounts for how hidden areas are

discovered: comparing the features and configurations of the gameworld with the downloaded

maps provides clues about where the maps are incomplete, and thereby suggests where

additional exploration or action is required on the part of the player.

These interpretive operations are vital to the appeal of *Super Metroid*, and a closer look at

a specific example, concerning the game's bosses, should help make the process clear. Early in

the game, Samus comes across a unique room that appears to be a dead end. In its center is a

tableau of four statues (Figure 6). Though players may not realize it at first, these represent the

game's four bosses: Kraid, Draygon, Phantoon, and Ridley. Samus must, at this point, turn

around and explore further. After Samus reaches and defeats Kraid, the first boss, Kraid's

chamber is marked with an X on the map screen, and if Samus returns to the statue room, the

Kraid statue will turn gray and "die," instructing the player – without recourse to any written

instructions or expository dialogue – that finding and defeating all four creatures represented by

the statues is a goal. When all four are defeated, the statues will sink into the floor, clearing the

way for Samus to access Tourian, the area of Zebes in which Mother Brain, the final boss, lurks.

It would be eight years before *Super Metroid* would see a follow-up game, but its three-dimensional prequel, *Metroid Prime* (Retro Studios, 2002), was another critical and commercial success. The popular gaming press claimed that this was because it featured all the exemplary gameplay of *Super Metroid* translated into a first-person, three-dimensional environment; for example, *IGN* gushed that "one of the greatest game franchises of all time is totally reborn on Nintendo GameCube, replete with nearly everything that made *Super Metroid* so stellar and perhaps even more." (Mirabella, 2002) To put it in a more nuanced way, the relationship between the player's agency (the open-world, non-linear exploration) and the game's imperative storytelling (the combination of clues and constraints indicating where the player must go and what he must do) was balanced in the 3D *Metroid Prime* in a manner analogous to that same relationship in the 2D *Super Metroid*. This can be seen, once again, through the game's use of maps and its affordances for reading the gameplay space.

In *Metroid Prime*, Samus lands on the surface of the planet Tallon IV, where a Galactic Federation outpost has been attacked by Space Pirates. Fully rendered in polygonal three-dimensional graphics, the cavernous terrain through which the player must guide Samus is no longer bounded by the rectilinear mode of the side-scrolling platformer. The gamespace varies between the expanses of Tallon IV's surface terrain, the twisting paths and crannies of its underground caves, and the corridors and chambers of industrial buildings and ancient ruins. *Prime* players cannot orient themselves without looking around in 360 degrees, and even then, obstructions, blind corners, and distance effects make it difficult to "read" the terrain without moving around and keeping track of the shape and idiosyncrasies of each chamber. Where the original *Metroid* caused disorientation because of its repetitive geography, *Metroid Prime* made it easy to get lost thanks to a geography whose wealth of detail is ironically not patterned enough.

However, like *Super Metroid*, *Prime* also has affordances to compensate for this: it too has an auto-mapping feature, but in this case the map is constructed out of translucent polygons, and can be scaled and rotated by the player (Figure 7). Indeed, this manipulation is crucial, as only some parts of the map are comprehensible from any one point of view at a time, which is why a conventional top-down or side-view map would not be much help. Compare this, for instance, to maps made of Nintendo's early polygon game *Star Fox* (1993), which abstract the three-dimensional gamespace so much that they make the maps' value for strategizing practically nil (Figure 8).

Metroid Prime also requires that its geography be read on multiple levels, building on the pattern set by *Super Metroid*. Samus is equipped with a number of scanning visors that allow her not only to detect hidden features of the terrain, but also to analyze information about Tallon IV's indigenous creatures, and to fill in story points from logs and notes she finds scattered about the Galactic Federation outpost and the Space Pirates' base. Since scanning enemies and environments alike for weak points is necessary to progress, the player is encouraged to discover the "plot" from these sources as a natural part of the exploratory gameplay. There is none of what prominent game designers have called "ludonarrative dissonance" (Hocking, 2007) or any conflict between *Prime*'s "story meaning" and its "dynamical meaning." (Blow, 2008) The Samus avatar is expected to do nothing with respect to her "character" that contradicts what the game allows and even requires the player to make her do. Meanwhile, the gameworld – and, crucially, the map which abstracts it and facilitates its interpretation – is constructed in such a way that it signals what the player must do and where he must go without being too obvious, linear, and boring; or too obscure, contradictory, and confusing.

   Metroid Prime became the first entry in a trilogy consisting of *Metroid Prime 2: Echoes* (Retro Studios, 2004) and *Metroid Prime 3: Corruption* (Retro Studios, 2007), which introduced some refinements and novelties to Samus' weapons and interfaces, but copied the same essential gameplay. Meanwhile, *Metroid Fusion* (Nintendo R&D1, 2002) and *Metroid: Zero Mission* (Nintendo R&D1, 2004), both for the Game Boy Advance, continued the same style of 2D, side-scrolling gameplay as *Super Metroid*, also with some minor changes to the control scheme and to Samus' in-game abilities (she could now hang off of ledges, for example). However, in these two sequels the maps are more detailed than in *Super Metroid*, and, more significantly, they explicitly mark where each successive goal is. This extra imperative makes *Fusion* and *Zero Mission* begin to approach a more linear play style, despite the fact that much of this involves backtracking or opening up new areas in novel ways. This is not to say that earlier games such as *Super Metroid* and *Metroid Prime* could not be considered linear in a certain sense (there is an optimal route to take to complete each game), but unlike *Fusion* and *Zero Mission*, they had more affordances for digressions and casual sequence breaking.

   Metroid Fusion should be noted for two more reasons: it is the first *Metroid* game to rely heavily on Samus' narration (through on-screen text) to convey the story-elements, and it is the first to introduce (albeit tangentially) the character Adam Malkovich. In *Fusion*, Samus has returned from planet SR388, only to be infected with a strange new parasite called "X", which has transformed her power suit. When the space station where the X is being studied suffers a mysterious explosion, Samus investigates. She is instructed where to go and what to do within the crippled facility by her spaceship's onboard computer, whom she calls Adam after her imperious former commander, Adam Malkovich. This is explained via on-screen text narration (Figure 9). At the end, Samus discovers that the computer "Adam" in fact contains the uploaded

consciousness of the long-dead Malkovich. Samus's first-person narration via interior

monologue and Adam Malkovich's instructions and constraints regarding what Samus can do

within the gameworld, two features which would aggravate certain gamers so much in *Other M*,

have their origin in *Metroid Fusion*. Why was this less problematic in the earlier game? These

features did push the affordances of *Metroid* gameplay from a particular balance between world

exploration and narrative control in favor of the latter – stating goals more directly through

dialogue and making the gameplay somewhat more linear. Yet these trends neither overwhelmed

the experience of the game, nor directly conflicted with the core gameplay.

Space and Narrative in *Metroid: Other M*

Metroid: Other M was released in late 2010 for the Nintendo Wii, and, like the *Prime*

trilogy, it features a three-dimensional world to explore. However, most of its gameplay is in a

third-person perspective, and the emphasis is far more on action than exploration. Even more

significantly, a conscious effort was made to relate Samus' backstory in great detail within the

game, something that had been conspicuously lacking in previous games. Unlike *Super Metroid*,

in which the sequence of events or fabula[5] is quite simple, and the in-game story can therefore be

told without much dialogue, *Other M* is, according to designer Yoshio Sakamoto, "more about

Samus's internal workings, her feelings, and her background. To express something like that,

you really have to use words; it's unavoidable if that's your goal." (Nutt, 2010) *Other M* follows

up right after the events of *Super Metroid*. Samus responds to a distress call from a "Bottle ship,"

on which the Galactic Federation is conducting secret and illegal biological weapons

experiments. When Samus arrives, she meets a squad of soldiers led by Adam Malkovich, who

had been Samus's commanding officer before she became an independent bounty hunter. She

agrees to join Malkovich's unit – and to obey his commands – as they investigate the Bottle Ship.

As the gameplay progresses, Samus' history with Malkovich is revealed through cinematic

flashbacks and through Samus' voice-over narration. Ultimately, Malkovich sacrifices himself to

destroy the resurrected Metroids that are being bred on the ship.

Sakamoto pointed out while the game was in development that "there's a lot of different

ways to tell a story, and we're going to have alternating sequences of movies and then action

sequences [in *Other M*]. Both of them really need to hold up in terms of storytelling; they both

have to do their share of the work." (Nutt, 2010) However, Sakamoto appeared to put more stock

in the seamless flow between the two not-always-compatible media of cinema and video games

than in mastering the affordances of both. His idea that "words" were necessary to tell the more

complex story of *Other M* might help explain the long expository monologues that Samus

delivers throughout the game's cinematic sequences. Here is one representative example from a

flashback sequence early in the game:

>And I was angry. I felt that if I let my guard down, I would easily be broken. And
>
>beyond that, I was scared. But even in the naiveté of my youth, I could see in
>
>Adam's joking manner how close he felt to me. Adam knows my past. And he
>
>knows me better than anyone else. Confession time. Because I was so young
>
>when I lost both of my parents, there's no question I saw Adam as a father figure.
>
>When I rebelled against him, I knew I could get away with it. And his paternal
>
>compassion in the face of my rebellion reinforced the special bond I felt with him.
>
>I understood well that chances were slim that I would ever find anyone that
>
>understood me like Adam. And yet... When the time came, I still left his side. I
>
>was so young. Young and naive... (Team Ninja, 2010)

Such copious "confessions" can be hard to present effectively in mainstream narrative film, where flashbacks and voice-overs can conflict with the core precepts of drama, which call for action and dialogue in the present; diegesis (verbal description) and mimesis (imitation or presentation of action) are inherently contrasting narrative modes. (Ryan, 2006, p. 13) One scene in which this incompatibility is particularly noticeable is when a reborn Ridley, Samus' nemesis across the *Metroid* franchise, throws her squadmate Anthony into a pit of lava. In the very next cut-scene, players watch it again in a slow-motion flashback complete with Samus's dissection of her own emotional state: "I wondered if Anthony was conscious as he hit bottom … Unbearable thoughts welled up in me, making me want to get as far away as I could. I regretted not being able to protect him … and I regretted thinking, even for a moment, that he would betray me or fail to come to my aid at the expense of his own safety." (Team Ninja, 2010) Here story-meaning and dynamic meaning clashed jarringly: during *Other M*'s gameplay, players maneuver the Samus avatar through all manner of intricate combat moves to dispatch wave after wave of terrifying alien creatures, but once they trigger a cut-scene, Samus reverts to what some interpreted as a stereotype of a girl who is unable to handle her emotions and needs men to tell her what to do. (Cowan, 2010)

Samus' portrayal inspired negative reactions and even satire from fans,[6] and in the months following the game's release, Team Ninja and Nintendo were publicly blamed. (Plunkett, 2011) Not only does Samus subordinate herself to Adam Malkovich's orders in *Other M*, she only uses her Power Suit's impressive arsenal after he specifically authorizes it. Unlike earlier *Metroid* games, where Samus must track down upgrades to her suit throughout the gameworld, she has all these abilities at *Other M*'s outset, but doesn't use them, even when they would make it a lot easier for her to defeat enemies and access new areas. This removes even more of the

exploratory impetus, and this is reflected in *Other M*'s mapping system. Samus no longer seeks

out map rooms; instead, save/navigation rooms appear regularly along her way, and at each one

the map is simply extended toward the next goal. Even in *Fusion*, there are times when Samus

has to explore to find a map download, but not here. Malkovich marks all the goals on the map,

which, despite the three-dimensional environment through which Samus progresses, is always

two-dimensional, viewed from the top down (Figure 10). Thus there is little need to use the maps

to read the environment, as in *Super Metroid* or *Metroid Prime*; the map is only required for

indicating general direction. Moreover, after Samus destroys the last Metroid Queen and the

artificial intelligence controlling it, she returns to the Bottle Ship, only now every remaining item

that the player hadn't already discovered is marked on the map. This makes it quite easy to

achieve 100% completion, formerly a trademark accomplishment throughout the *Metroid* series.

In games like *Super Metroid*, the highest challenge came from maximum completion in the

shortest possible time, which would unlock the "best" ending. Skill at defeating enemies is

important, but secondary, when playing with this goal in mind. Such accomplishments depend

instead on spatial mastery: first, to find all the hidden power-ups, and second, to use that

information to plan the most efficient route to progress through the entire game. In *Other M*,

though, there is no reward for "speedrunning", and completion unlocks a "hard" mode. The

challenge from replaying this latest *Metroid* game comes from mastery of the interface: in hard

mode, there are no power-ups, forcing Samus to defeat enemies with minimal life energy. This

requires very quick reflexes, skillful use of the combat engine, and practice against enemy attack

patterns – but there is no need to learn to read, and thereby master, the gamespace.

The bias towards interface over space, towards an already-learned control scheme as

opposed to a dynamic reading of gamespace, also accounts for some of *Other M*'s failings at

imperative storytelling. It is often difficult to understand what must be done when the game does

require players to "read" the gamespace because it functions in this "action" mode: not only must

players respond very quickly, but they must also read a space that has not been as well designed

for that purpose as the gameworlds of earlier *Metroid* installments, a task made more difficult

because players have not been encouraged to develop their geographic literacy during

gameplay.[7] One instance of this comes near the end of *Other M*. After Samus destroys the

Metroid Queen, a long cut-scene follows in which Madeleine Bergman, the scientist in charge of

the Bottle Ship experiments, explains her work with "MB," the android artificial intelligence

whom the scientists used to control the Metroids. After more expository flashbacks, MB arrives

and unleashes heavily-armored enemies (Desbrachians) against Samus.

  This last instance of combat before the game's end is incongruous from the point of view

of traditional storytelling: it is anticlimactic after the complicated and challenging battle with the

Metroid Queen. But it also fails because it is unclear what must be done. Consider what the

player is presented with (Figure 11): she is put into a first-person view, and is attacked by the

most powerful non-boss enemies in the game. These materialize constantly, and without end. No

matter the player's skill, she will eventually run out of missiles with which to destroy the

Desbrachians and be killed. But there is no way to realize this until Samus has been killed

multiple times; making matters more frustrating, the last save point was before the battle with the

Metroid Queen, so the player cannot quit the game and try again later unless she is willing to

fight the Queen once more and sit through the cinematics that follow. What must be done is not

defeat all the Desbrachians, but stop MB, who is controlling them far off in the distance: the

player must see and recognize this small figure while being endlessly attacked, then wait for an

opening (Figure 12), and then target MB in order to trigger a cut-scene in which it is not even

Samus but Madeleine Bergman who shoots the raging android. Ironically, a situation such as this could, from an imperative storytelling point of view, benefit from Samus' voice-overs – a "bark" along the lines of "I've got to target MB before those Desbrachians wipe us out" – which, though perhaps too obvious, would err on the side of caution and have plenty of precedent in other recent games.

In this way the immersive "flow" (Csikszentmihalyi, 1990) is disrupted; *Other M* serves as a cautionary example of how not only an understanding of how to merge two narrative media (the cinematic and the ludic) is necessary in a good story-game, but how an understanding of the affordances of each medium as it operates *in isolation* is necessary. After all, as early as *Metroid Prime*, shifting between a first-person and a third-person perspective, and thus between player-actuated gameplay and program-controlled cinematics, had been achieved with the seamless fluidity of montage (Galloway, 2006, p. 65). *Other M* was praised on this purely technical level (e.g. in Harris, 2010; Cowan, 2010), but was criticized over its use of the modes separately. Specifically, the content (dialogue, plot dumps, and so on) of its cinematics conflict with the affordances of the gameplay, and the deployment of those cinematics (pacing, flashbacks, and so on) is not in keeping with long-established cinematic norms.

Implications of Metroid's Imperative Storytelling and Cognitive Mapping

If for these reasons *Metroid: Other M* was not as well received as its predecessors, then what are the implications for practice? Despite the strong positions of ludologists who resist any place for storytelling in games (e.g., Eskelinen et al., 2004), it must be acknowledged that developers and gamers alike maintain a strong interest in story-games (Lebowitz and Klug, 2011). This is not in itself a bad thing. However, game designers' skills with gameplay elements are not always matched by their skills at narrative modes (Blow, 2008). Rectifying this requires a

more sophisticated understanding of narratology (Eskelinen et al., 2004), especially as it relates

to film studies, since, despite the differences between the procedural, "interactive" nature of

games and the linear temporality of film, cinematic techniques and expectations for mimetic

realism continue to be the dominant mode of visual representation in many new media, games

included (Manovich, 2001). Insofar as cinema serves as an element in story-games, the

conventions of cinematic narration, such as "natural" temporal order and duration, sparing use of

voice-over, and so forth, should be learned and followed. Moreover, an understanding of

imperative storytelling techniques – how objects within the gameworld signify to the player what

he must do – rather than techniques borrowed from film, can help minimize the dangers of

repeating what one reviewer called *Other M*'s "frustrating puzzles that require tedious guesswork

and obsessive pixel hunting to solve." (qtd. in Cowan, 2010) Understanding how players read

both virtual environments as well as cartographic representations of those environments, alone

and in tandem, can aid in designing compelling play spaces that balance exploratory freedom and

designer control in accordance with players' expectations in the action-adventure/puzzle genre.

     The facility and, indeed, the necessity for map-making and space-reading in games such

as *Metroid* and its sequels gives added weight to claims for the relevance of games as objects of

study in a new media age. Even videogames with comparatively little narrativity have been

compared fruitfully to colonizing travel narratives (Fuller and Jenkins, 1995), and subsequent

research across a number of fields has suggested complex relationships between spaces and

signification. For instance, digital designers have become more attuned to the fact that the

reading of written language and the figurative "reading" of landmarks and other spatially-

oriented objects involve the same cognitive processes (Murray, 2012), while literary studies have

given increasing attention to mapping and other graphic abstractions as a way to bring new

insight to narrative issues and genre studies (Moretti, 2005). Franco Moretti's recent use (2013) of graphs to reveal new structural relationships between characters in Sophocles' *Antigone*, for example, recalls the nodal structure of the *Metroid Prime* trilogy's database entries.

For decades, architects have thought about how spaces can be made to tell a story in the way that they lead visitors through a building (Jameson, 1991), a technique most spectacularly demonstrated in the construction of modern theme park attractions (Darley, 2000) and with growing importance in the analysis of virtual worlds. (Nitsche, 2008) Indeed, games scholars have looked to geographers from Kevin Lynch (1960) to David Harvey (2006) for models of understanding space within virtual worlds; this has led to some rather complex taxonomies of material, conceptual, and representational spaces in games, which include, among other things, the "literacy of gamespace" and the "learned map" (Huber, 2009). Thus a number of disciplines have taken a spatial turn, which is in turn reflected in the broader study of games beyond the digital kind. (von Borries et al., 2007)

But perhaps the most striking parallel between efforts to understand gamespaces and "real" spaces can be seen when the process of imperative storytelling in video games is considered as one of many kinds of "cognitive mapping." Originally a psychological concept, cognitive maps have become useful tools for understanding a variety of conceptual spaces, such as interpersonal networks within corporate bureaucracies. (Jackall, 2010, p. 135) But the idea was most famously taken up by Fredric Jameson in *Postmodernism, Or, The Cultural Logic of Late Capitalism*. Building explicitly on Lynch's work on the "imageability" of urban spaces, Jameson speaks of cognitive mapping as a possible way for the contemporary subject to situate him- or herself in a postmodern world that is otherwise unrepresentable in its entirety. (1991, p. 51) No one system of representation can suffice to understand the intricacies of contemporary,

multinational capital flows, to name only one complex system; we must therefore deploy a

variety of "mapping" techniques in concert, trusting that the epistemological blind spots of each

will be compensated for by the others in a kind of postmodern triangulation. The navigational

schematics found in games like the *Metroid* series perhaps point to a way in which such a

process occurs: imperative storytelling is successful exactly insofar as it allows game players to

construct *coherent* cognitive maps. Thus games can demonstrate that, at least in a narrow sense,

mapping the hyper-real or the virtual aspects of twenty-first century life is certainly possible, and,

for all but the simplest spaces, even essential. Moreover, such mapping allows gamers to

understand virtual worlds and their semiotic systems – and thus, by extension, their ideological

content – without detailed knowledge of the programs' underlying code or engines, something

analogous to the relationship between a map and the world. Maps have since the Renaissance

been powerful conceptual tools for enclosing, and thereby mastering, systems and spaces that are

too complex to be known in any other way (Harvey, 1989). Clearly, an understanding of the

skills with which we navigate gamespaces is linked to the way in which we navigate the other

virtual spaces that have encroached so much upon contemporary life in the developed world.

For Jameson, an aesthetic of cognitive mapping is what is necessary for contemporary,

political art. But it is precisely as objects of "art" that video games have often fallen short, and

therefore it is doubtful whether games can be liberating to the political degree for which Jameson

argues (especially in current commercial games; cf. Galloway, 2006). Here too *Other M* serves

as a specific example that illustrates a cautionary tale, and the literary concept of allegory, and

what it may mean in the context of video games, can be especially instructive. Espen Aarseth has

argued that the relationship between the mimetic properties of gamespace and the real world is

an allegorical one (2007), and this view informs Walz's definition of the "representational"

approach to video games. (2010) On one level this is certainly true. But at the same time, there

are conceptual approaches that arguably do the opposite – instead of focusing on the mimetic, or

what might loosely be called the "surface" elements of a particular gameworld, critics such as

Alexander Galloway stress the need to interpret the game's procedural system, its underlying

algorithm, to uncover what he calls its "allegorithm" (2006, p. 91). This is certainly more

appropriate for a game such as *The Sims* – compare McKenzie Wark's allegorithm-based

analysis (2007, pp. 26–50) with the narrative-based analysis of the same game proffered by Celia

Pearce (2004, pp. 150–152). And yet there are still other games in which an allegorical

understanding depends precisely on the equal intersection of representation and narrative on the

one hand as well as the formal game-system on the other – this might include the controversially

ambiguous endings of *Braid* (Number None, Inc., 2008) or *Mass Effect 3* (BioWare, 2012;

Arnott, 2014), where the games' designers very deliberately constructed narrative meaning

through a combination of traditional representation and procedural logic, both working in tandem.

When the problems of *Other M*'s imperative storytelling are considered in this context, as an

allegorithm that is internally contradictory and that therefore makes little sense, we can begin to

understand why *Other M* confused players and reviewers and why it was not as warmly received

as earlier *Metroids*.

   The temptation to speculate that, in its own small way, dissatisfaction with *Metroid:*

Other M is a reflection of larger frustrations in making sense of fragmentary postmodern space is

perhaps not so farfetched. A contemporary subject analogous with the independent, self-

sufficient Samus Aran of *Super Metroid* is very different from a subject analogous to the

insecure, schizophrenic Samus of *Other M*; it is clear that a self-coherent avatar strikes many

gamers as more plausible, and part of that coherence is demonstrated by how she, and by

extension the player, interacts with the gameworld. Moreover, what was interpreted as the feminization of Samus in *Other M* reveals some of the gendered assumptions behind a female player-avatar and what they say about the insecurities of some players, especially in light of the recent "GamerGate" controversy. As self-identifying "traditional gamers" perceive themselves as being under attack (Alexander, 2014), and an anonymous online fringe makes threats against female game designers and critics (Vossen, 2014), changes to the earlier "strong, silent type" representation of Samus may seem like part of the same threat to traditional power fantasies.

Thus, if we were to indulge in another leap of metalepsis (Harpold, 2008) and "map" *Metroid* player preferences onto the real world, the structured freedom which an open-source Samus represents is preferable to the top-down control of an Adam Malkovich who authorizes our downloads, monitors our progress, and constrains our movements. But it is equally clear that an opposite trend in the design of games and virtual worlds has been occurring: tutorials and redundant on-screen instructions have become far more common. Game-maker Anna Anthropy notes in a discussion of this trend that when the designers of *New Super Mario Bros. Wii* copied the iconic opening level of *Super Mario Bros.*, they added a sign with an arrow indicating the direction Mario had to go that was redundant in light of the original game's "communicative visual vocabulary." (Anthropy & Clark, 2014) The changes in the *Metroid* series' approach to imperative storytelling since the 1990s is a part of this wider tendency.

Using a communicative and space-based approach to dissecting the contradictions within an action-adventure/puzzle game like *Other M* may only be a "close playing" of a storied game franchise. But such a detailed understanding is a start to figuring out, for the design-minded, what does and does not work within the genre. For those who wish to go beyond the formal implications, the specific kind of cognitive mapping – and cognitive dissonances – modeled by

the *Metroid* series offer a way to comprehend the political and ideological aspects of gamer

subjectivity. Building a better gameworld and improving our understanding of the spaces of real

life need not be separate projects; they may in fact proceed most effectively when, like the

worlds and maps of *Metroid*, we scan them together.

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[1] Some genres of videogames, such as music games or rail shooters, have little use for maps; others, such as God-game simulations (Gardner, 2007) are even more dependent on cartographic representation.

[2] This is in contrast to open-world sandbox games such as *Grand Theft Auto V* (Rockstar, 2013), where map routes are automatically plotted and text instructions are displayed for the player; in that genre, it is less important for the gamer to decipher spatial clues in order to advance the story.

[3] A similar process can also occur in other media; for example, David Bordwell's (1985) constructivist theory of film narrative describes how "every film trains its spectator" in addition to being made with attention to various extra-textual schemata (p. 45).

[4] Other contemporary games tried to compensate for this – for example, *The Legend of Zelda*'s (Nintendo EAD, 1987) game screen had a very crude representation of the player-avatar's position relative to the rest of the overworld or dungeon, and the cartridge came packaged with a fold-out printed map. The instruction manuals for *Final Fantasy* (Square, 1987) and the NES version of *Ultima IV: Quest of the Avatar* (Origin Systems, 1990), for instance, go even farther than *Zelda*: both contain dozens of pages of extensive walkthrough information and maps, and run up to eighty pages.

[5] In the formalist sense of a cognitive model of story; this is contrasted with *syuzhet*, corresponding to "narrative" or "plot," that which is materially (or virtually) presented in text or other media.

[6] A representative cartoon satire of *Other M* can be found at http://www.nerfnow.com/comic/372

[7] "We spent 20 frustrating minutes trying to figure out what we were supposed to look at during one scene," wrote one reviewer of *Other M* (Scullion, 2010) – and that was *without* being constantly attacked.

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Figures:

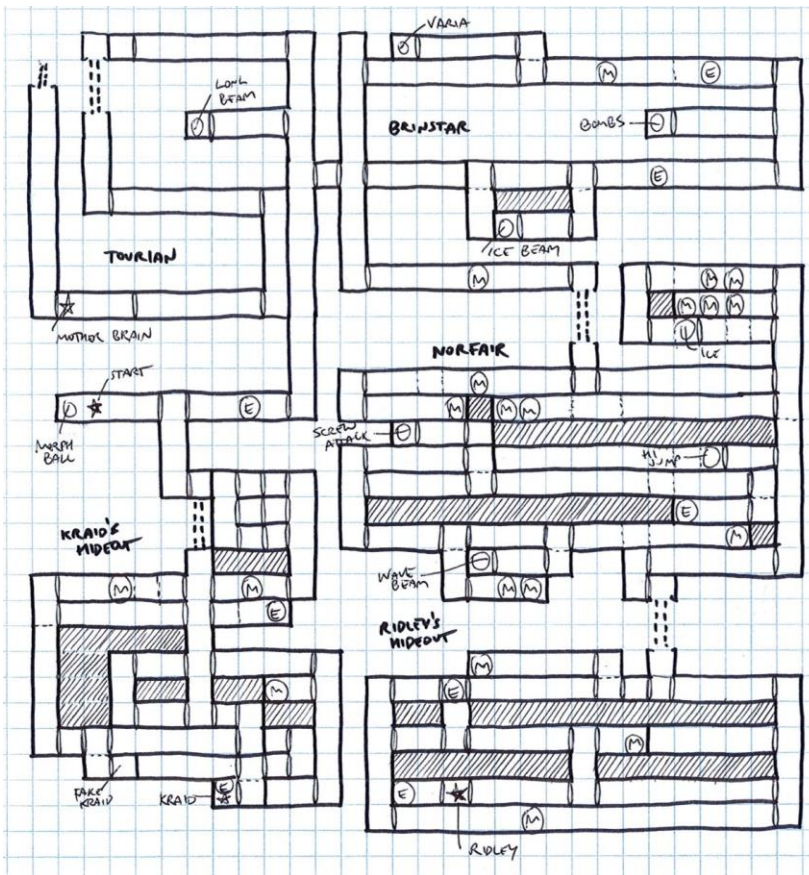Figure 1: Opening gameplay screen of *Metroid*.

Figure 2: Player-made map of the *Metroid* gameworld.

Figure 3: The morph ball (*mari maru*) chamber in *Metroid*.

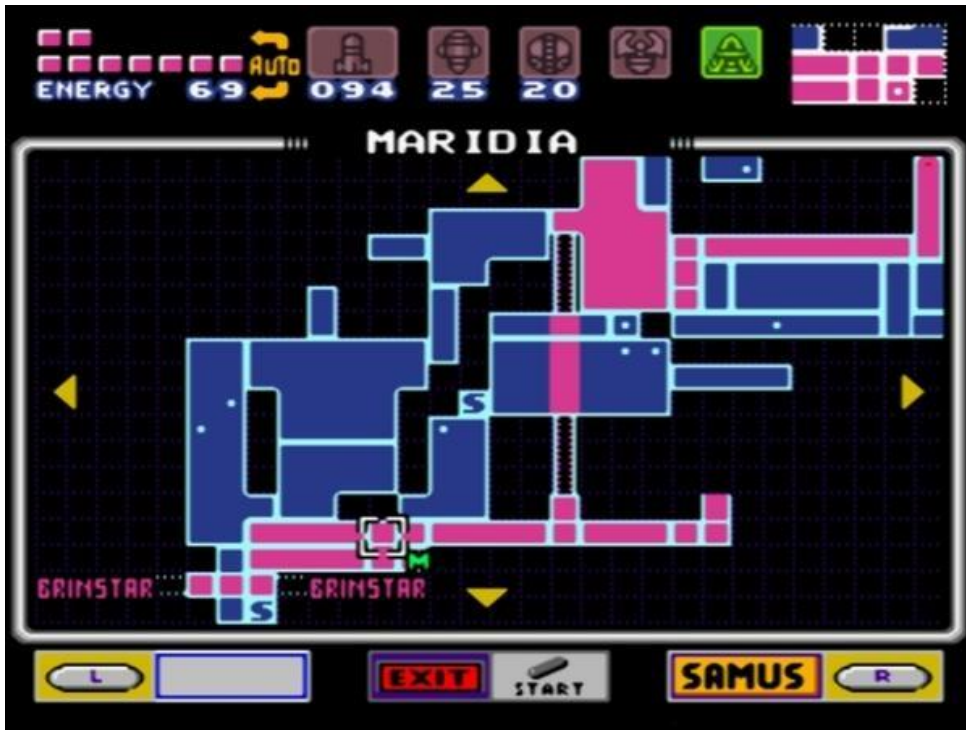Figure 4: The morph ball chamber in *Super Metroid*.

Figure 5: Map screen from *Super Metroid*. Explored areas are in pink, unexplored in blue. Dots represent items, "S" indicates save rooms.
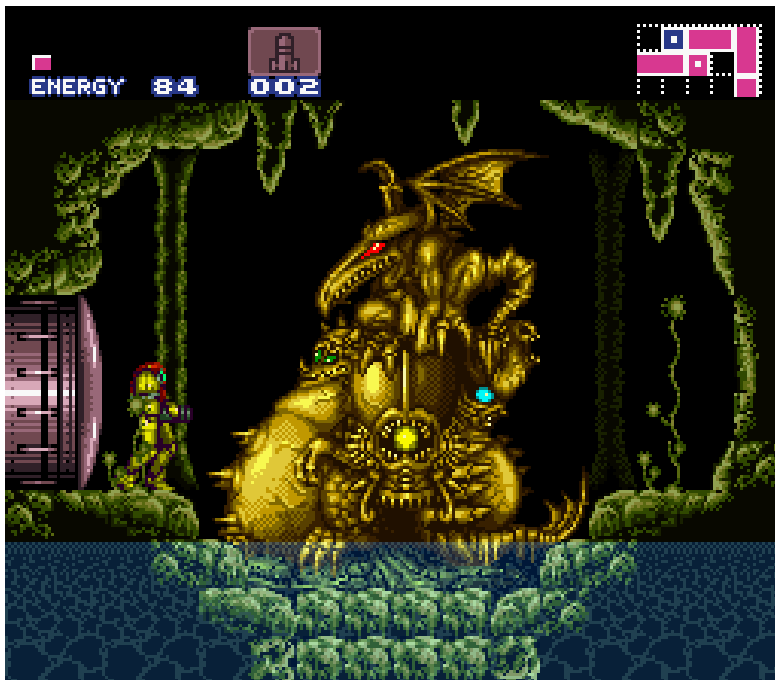

Figure 6: The boss-statue room as it first appears in *Super Metroid*. Note the breakable blocks at the bottom of the screen, and the corresponding lack of a white bottom border on the room in the mini-map (upper right).

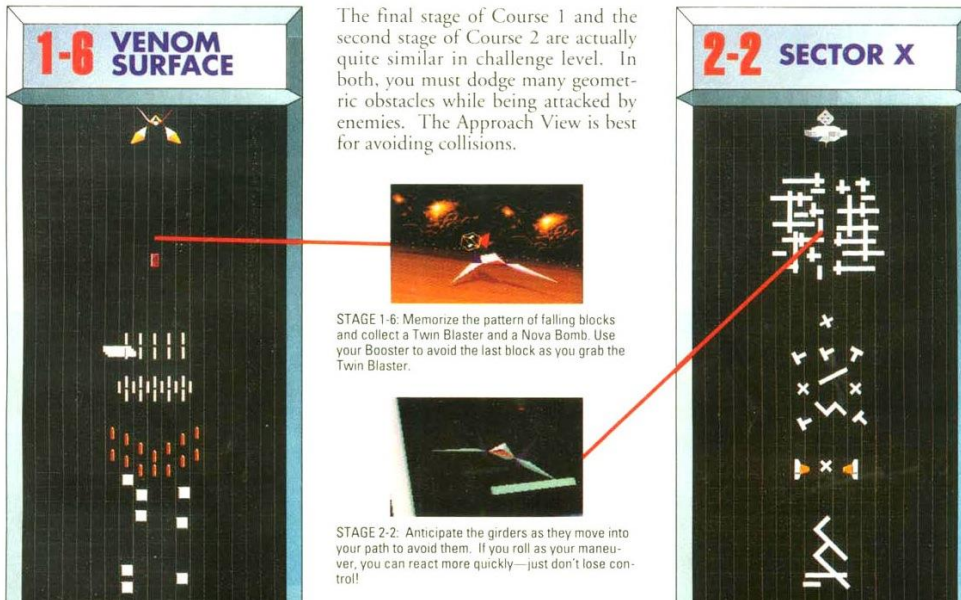Figure 7: The scalable, 3D map screen of *Metroid Prime*.

Figure 8: Maps of *Star Fox* levels. (Source: *Nintendo Power* #51, Aug. 1993)
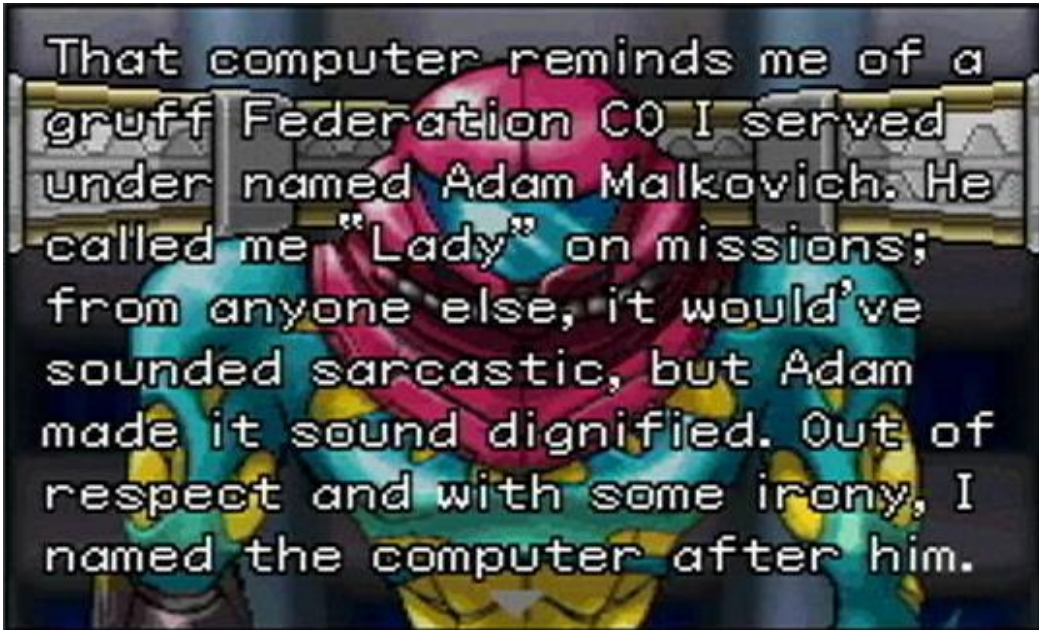
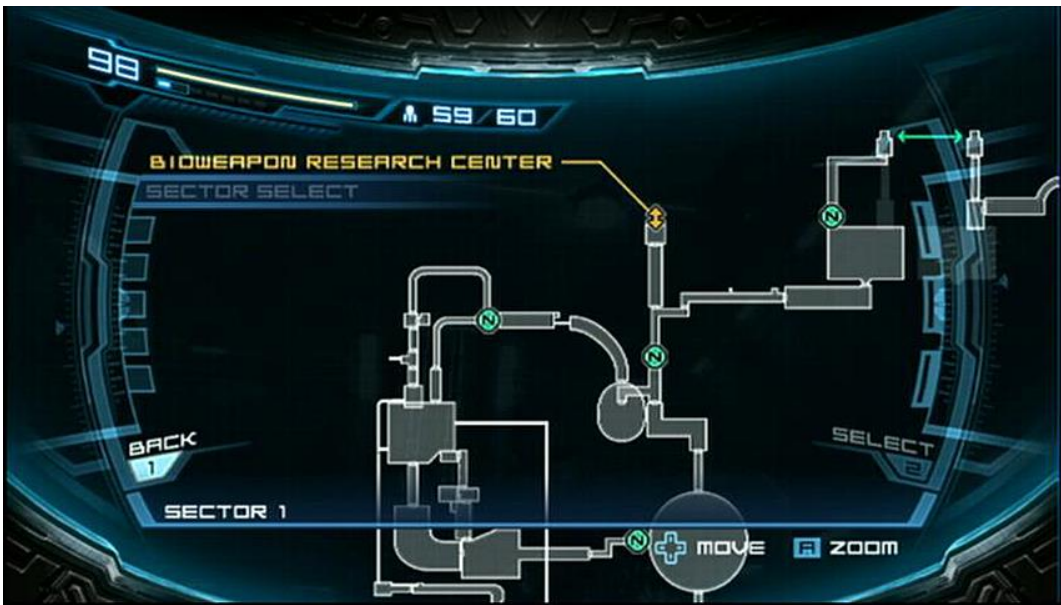Figure 9: Samus's in-game text narration from *Metroid Fusion*.

Figure 10: The map screen in *Metroid: Other M*.

Figure 11: The first-person view during the Desbrachian attack in *Other M*.

Figure 12: Between Desbrachian attacks in *Other M*. Note the small figure of MB in the far distance (center).