Memory of a Broken Dimension: a study in a politics of skill for experimental art games

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ABSTRACT

This paper outlines a political theory of digital games using conceptual resources drawn from the history of art. Beginning with a close reading of a single game—*Memory of a Broken Dimension*—the author develops his theoretical concerns through a contrast between Ian Bogost's theory or procedural representation and a theoretical framework focused on the politics of skill acquisition process, embodied activities of information access and manipulation, and the historically determined forms of material objects. By revisiting key texts pertaining to minimalist sculpture—specifically those of art historian Michael Fried and artist Robert Morris—the author elucidates the connection between *Memory of a Broken Dimension* and the lager political stakes of his project.

Keywords

Art History, Experimental Art Games, Minimalist Sculpture, Perception, Systems Theory, Serious Games, Procedural Representation, Skill Acquisition, Learning, Post-industrial Society

INTRODUCTION

A political theory of digital games that is based on a theory of representation and criticality (like that provided by Ian Bogost in *Persuasive Games*) will define the role of the designer, and will describe the experience of playing digital games, in ways that do not account for significant dimensions of the politics of game design and of play experiences. In contrast to theories of procedural representation, a political theory of digital games that is sensitive to the intimately connected activities of game designers and players can be conceived by using conceptual resources drawn from the history of art. Specifically, the classic debate between Robert Morris and Michael Fried (concerning the minimalist sculpture of the 1960s and 1970s) is rich in concepts relevant to describing the political stakes of experimental art games and to elucidating the sense in which these games are experiments. I ground this theoretical project in a detailed description of a single game—*Memory of a Broken Dimension* (*Memory*) (Datatragedy 2012). I use the work of art historian Jonathan Crary and political philosophers Darin Barney and Maurizio Lazzarato to clarify my interest in several key areas: the politics of skill acquisition processes, embodied activities of information access and manipulation, and the historically determined forms of material objects. I then elucidate my perspective on the politics of game design and of play experiences through a synthesis of my close reading of *Memory* and an exegesis of the Morris–Fried debate.

MEMORY OF A BROKEN DIMENSION

Over the course of ten years in the digital games industry, Ezra Hanson-White, the designer and producer of *Memory of a Broken Dimension*, has worked for Gearbox, Monolith, and Camouflaj game development studios (Donlan 2013). He produced *Memory* independently of these studios and released it on the internet as a playable demo.[1] The majority of the game is played in a 3D space navigated with A, W, S, D move commands and a mouse look, or what I call a move-look user interface (UI). In this respect, *Memory* stands at the end of a long line of 3D simulations that use avatars with spatial orientation abilities that approximate those of an upright, able-bodied person. I use the term *avatar* to describe the features of any form of information access and manipulation that manifests the user's agency within a computer system. It is *Memory*'s use of the move-look UI, and its deployment of that UI in full recognition of its historical existence as a form information access and manipulation, that makes *Memory* an apt choice with respects to the project of developing a theory of the politics of digital games that takes the relation between design and play experiences as its centerpiece.[2]

Memory begins with an emulation of a DOS command-line operating system (OS) (Figure 1). Text plunks onto the screen with scratchy staccato blips. Grey lettering wavers. Seething flows of energy stutter through characters dancing at the surface of the screen. Bands of white light and waves of magnetic distortion destabilize the ground of a glitchy milieu. In order to progress through the opening stage of the game, the player must use basic command line entries. The system will accept the commands "START", "GO", "EXIT", and "DIR". The "DIR" command (meaning: directory) brings up the contents of the system's C:/ drive. Accessing the computer's memory—the contents of its hard disk—is a matter of possessing personal memory of a particular genre of OS. If not, then another database is a likely recourse for the DOS n00b (or the forgetful gamer of the '90s) logging into *Memory*: the internet.
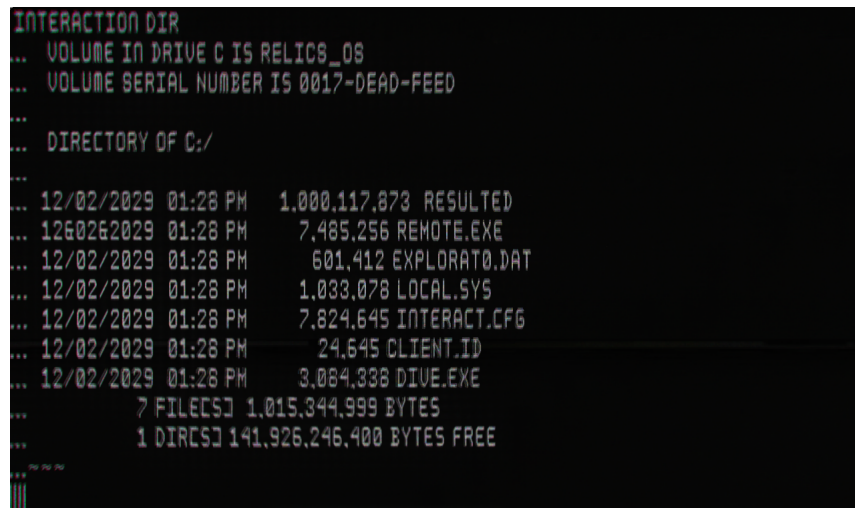

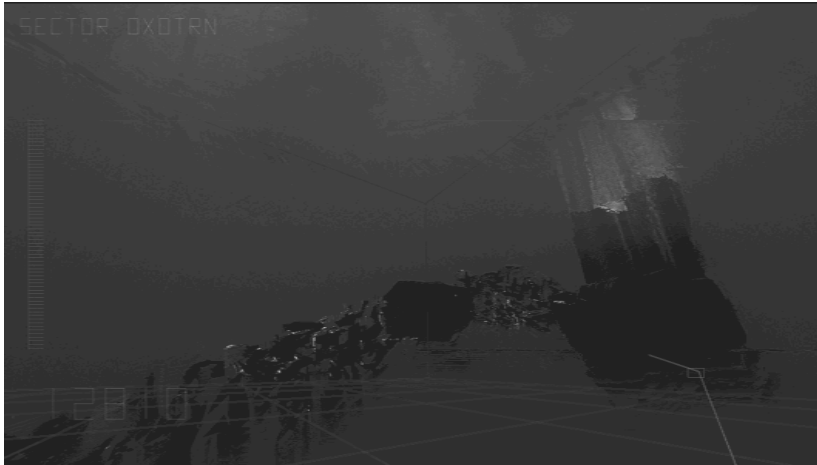**Figure 1.** Datatragedy, *Memory of a Broken Dimension*, 2012.

Figure 2. Datatragedy, *Memory of a Broken Dimension*, 2012.

One likely scenarios for the player unfamiliar with a command line OS is a Google search, which lead this author to Computer Hope: a not for profit IT help service.[3] A YouTube video of a player clearing the first stage is also available online.[4] Either method leaves us with an invocation of a particular facet of computer game history; that of online user-generated content providing information about the rules, controls, and strategies relevant to a specific game. Traveling from one context to another (from an IT help service to an emulated command line OS), I revisited inadequate memories of opening *TIE Fighter* (LucasArts 1994) through DOS on an Intel 486 at age 8. After clearing the DOS stage by entering the .exe files into the command line in the correct order, the player arrives in the main arena of the *Memory* demo: a 3D space where the move-look UI replaces the blinking text cursor.

The 3D world of *Memory* is a frenetic mess of cascading high frequency noises and sharp, jittering, fragmented objects set in a gray scale Cartesian space. Composed of a set of seven rooms, the 3D level is a series of gridded cubes, each of which contains fractured architectural structures and a ceiling that look like a portal to another dimension (Figure 2). As you move, your orientation by means of look and move commands is met with constant variations in the intensity of ambient noise and visual static. A room's overall shape and the splintered structures that inhabit it might be completely indiscernible from one vantage only to become partially visible from a spot that seems only a short distance away.

The undecidablity of why it is that one vantage is clearer than the next is compounded by what feels like a lapse in the functionality of a mouse acceleration algorithm. Because the visual and acoustic noise alters so frequently and unexpectedly, it can seem as though you have moved or changed visual orientation drastically when only the slightest input had been intended, or that holding to a given route with determination has yielded little change in appearances. As you walk between each room (by simply walking into one of walls) bursts of audible and optical static accompany your teleportation into another of the seven spaces or your relocation to the adjacent side of the current area. The profile of space and object, and the larger geography of the 3D level, is not easily established through the handling of the activities that provide access to the basic information of spatially oriented experience.
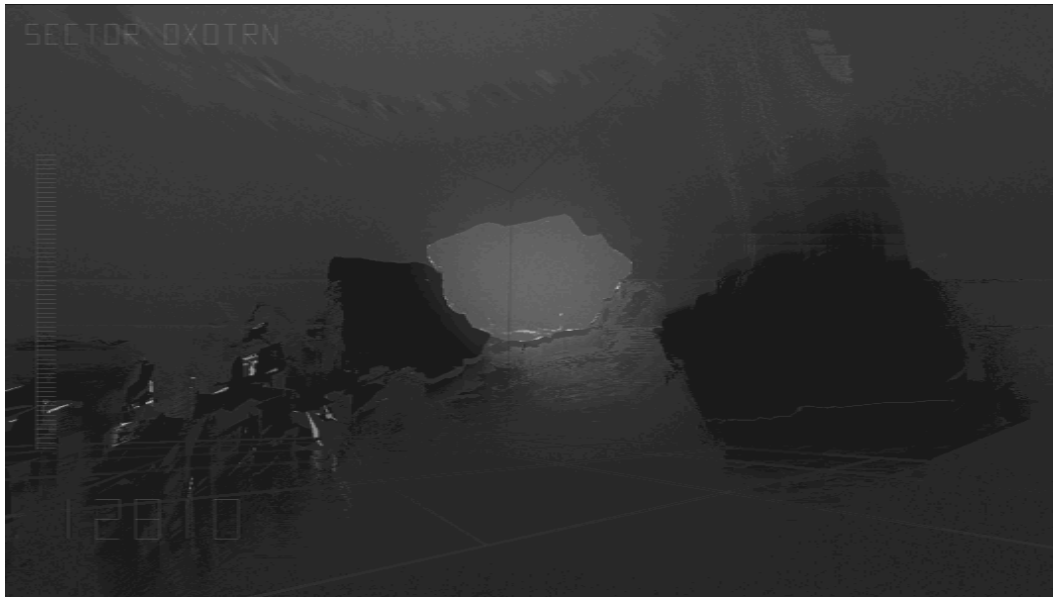
Figure 3. Datatragedy, *Memory of a Broken Dimension*, 2012.

In *Memories*, the orientation of lines of sight is not so much an activity constituting the volumetric profile of an object, or the depth relations that situate a center of activity in relation to a world of changing forms, but a form of command line entry. Each room contains place markers. These markers are pencil thin white lines that point toward part of a space; they are little bits of information about the relation between a position in the space, one of the fragmented architectural features, and the movement controlled by the player. When you move into the vicinity of one of these markers, you hear a noise that resembles the clicking into place of two objects meant for pairing, like the sound bite for dragging and dropping a file on a Mac OS. Upon hearing this sound, if the player moves their POV toward the area designated by the marker, a second coupling sound occurs and one of the fractured structures now appears with bands of glowing light solidifying its form (Figure 3). If the player clicks their mouse when poised correctly, the structural feature solidifies. A click in the wrong spot gets you a low-pitched mummer of disapproval, and a rightly directed orientation gets you a noise connoting a seething fusion of energized data. Movement itself is the method of data entry for a spatial command line system.

Connecting up the POV, a marker, and a structural fragment allows the player access to a pathway that leads them up toward the worm-hole-like ceiling. Each room connects to others not only through its walls, but also through passages that are formed by a series of bridges that must be established by the player using the POV data entry system. The move-look avatar is reduced to the status of a cursor plugging in entries that it makes blindly (that is, thanks to acoustic indicators) and according to a step-wise logic. All this—this anguish of spatial confusion and sonic bombardment under strong mobility constraints—to at long last make it to the top, and only to find a blue screen of death error message that leaves you only one option: restart.

PROCEDURAL REPRESENTATION AND THE POLITICS OF SKILL

Memory calls for a theory of the political significance of digital games focused on the historical existence of the generations of players, designers, and technologists whose private (though interrelated) activities culminate in our contemporary digital ludic culture. Two design features are most pertinent to this overarching need. First, the fine balance between legibility and disorder achieved using varying degrees of visual and auditory noise. Second, the equivalence set up between move-look UI and the command line OS; specifically how this equivalence is used in the thematization of the historical alteration of computerized methods of information access and manipulation. Both these features can be adequately theorized neither through a critical program focused on the representational properties of digital games nor through a model of game design practice focused on procedural systems.

It is by drawing on the conceptual resources of the history of minimalist art that I propose we articulate the political stakes of *Memory* within an account of the politics of skill in post-industrial capitalism. The aspects of post-industrial capitalism that are most pertinent to theorizing the politics of digital ludic cultures are not only adequate to our appreciation of the political stakes of *Memory* but also to the appraisal of the political program that follows from Ian Bogost's theory of procedural rhetoric, specifically as outlined in his book *Persuasive Games* (2007).

The politics of skill is at the heart of several critical accounts of the role of technology in the development of capitalist modes of societal organization. Art historian Jonathan Crary has shown that learning how to use new technology has been, since the mid 19th century, a necessary condition for becoming a functional member of society, a process fraught with failures and breakdowns of cognitive adaptability, and a phenomena that is allowing the owners of means of production to determine the skills required for productive labor (Crary 1999, chapter 1). Crary's argument involves a detailed account of how the design of nineteenth century moving image technology was conceived in order to organize the relations between spectator, device, image, and the surrounding space. The situational awareness of the spectator, and his or her orientation in space, was controlled in order to focus attention upon the spectacle of the moving image. The terminology used by inventors of moving image technology was, moreover, resonant with that of scientists and managers of industrial labor interested in the maximization of the worker's capacity for attentive involvement in productive tasks (Crary 1999, chapter 1). The creation of conditions optimal for skill acquisition and deployment was the goal of a diverse range of inventors and capitalists who aimed to circumscribe the situational awareness of individuals to those sensations relevant to productive labor and activities of cultural consumption.

Political theorist Darin Barney argues that the skills needed in 21st century post-industrial societies may require cognitive adaptability, but moreover these skills are being evacuated of value. Rather than proffering the invaluable crafts of old, the contemporary worker, coordinating information transactions with easy-to-use software, is fungible (Barney 2000). The skills needed to operate networked technologies such as data management software, word processing software, and communications technology such as phones and email clients are a requisite of everyday life. That is, the skills needed to work are—no, must—be acquired through the use of personal devices. Not only does this context provide employers with a pool of labor that is constituted by self-delegated tasks, it also means that the activities of information access and manipulation used in everyday life are the same as those relevant to productive labor. Familiarity with the historically

persistent design features of production software is something every post-industrial worker must bring with them to the job market. Similarly, the place of a computer within a system of networked devices, in relation to sources of energy, and in relation to sources of information input are all part of maintaining both the functionality of personal devices and the equipment owned by corporations. The encounter between subject and computer comes stocked with abilities; these abilities are further elaborated in new skill acquisition processes: the individual's experience with common genres of software (their lived history of computational device design) feeds into an endlessly altering horizon of new human-computer interaction situations.

Furthering this critical line of thought, sociologist and philosopher Maurizio Lazzarato has pointed out that the rhetoric of marketable skills drives the debt economy. Where student loans are a major source of new debtors, individuals who commit to post-secondary educational programs become locked into the future prescribed by those programs because the job market opened by a given skill set is the only plausible rout to repayment (Lazzarato 2011). Though Lazzarato does not take the lived experience of skill acquisition into consideration, it is suggestive to consider how his argument might figure into our understanding of the collective experience of playing digital games. The skills acquired through play are channeled by the tropes of game design practice; it is the set of gameplay activities that persist across iterations of a given genre that form the situations that players must adapt to. These skills are clearly conditioned by the corporate interest involved in producing many successive iterations of the same set of activities that have proven marketable in the past. However, it is productive to consider the flows of learning directed by the design of games and practices of play as a major component of the collective energy expended upon the development of skills in Western societies. These pathways of lived engagement with computer systems do not necessarily disrupt the control over the body excerpted by post-secondary pedagogical institutions or by the domestic scene of mass entertainment, but they necessarily constitute a different set of situations; ones that could potentially couple the player to a different modes of perception and richly historical relations with computer systems.

Crary, Barney and Lazzarato are neatly applicable to our consideration of the politics of contemporary game design because they allow us to travel between the design of image based technology (Crary), the larger context of every day technology use in networked societies (Barney), and the role of institutions in the transmission of skills among individuals conjoined by their shared position within the generational structure of human life (Lazzarato). The relevance of these theorists to the design of *Memory* (and to game designs that use the move-look UI more generally) will become clear only upon an elucidation of their imbrications with certain aspects of minimalist sculpture. But by first considering this theoretical framework in contrast to Bogost's theory of representation and critical game design practice from *Persuasive Games* we can gain a sharper focus on the stakes of the present appraisal of the politics of game design.

In *Persuasive Games* Bogost argues that videogames have a privileged status amongst representational media because designers can use games to create representations of complex systems (2007).[5] Moreover, videogames can represent the procedures that govern complex systems because videogames have rules that can be made to resemble the way those procedures work. Bogost describes the representational power of videogames as a dialogue between the designer and the player. The video game designer and the player can both ask "*how does this work?*" (Bogost 2007, 8). For example, the designer can ask: how does a city work? A game like *SimCity 2000* is an answer to that

question (Maxis 1994) (*SimCity*). *SimCity* is a simulation game that allows a player to control the development of a city by building roads and zoning areas of land, and by setting tax rates and making policy decision. The player sets aside land for businesses and for homes, and then sets the tax rates. The player's decisions are input for an algorithm. The city grows before the player's eyes while his or her decisions are manifest in the form of representations of buildings and simulations of citizens' behaviors that are generated by the computer and displayed onscreen. The player asks: how does *SimCity* work? The answer is that in-game actions that control zoning and taxation are input for an algorithm that determines how those decisions translate into graphical representations of land development and the behavior of an urban population. The game is a representation of how a city works, and getting the city to work is a matter of following the procedures that get the city working. Games can represent procedures because the in-game actions available to the player can be made to resemble the decision making activities that get things working in the world outside the game. The procedures of urban development (zoning and policy decisions) can be represented in a game and enacted through play.

Subjectivity slips into Bogost's account how representation works in the case of videogames when he moves past his theory of the representation of systems/procedures and into the normative question of why games ought to matter for players. Bogost suggests that the player ought not to simply ask 'how does *SimCity* work', but also 'how does the way *SimCity* works line up with my own understanding of how a city works in the outside world'? For Bogost, when the player is acting as the governor of a simulated city they are, on the one hand, making decisions and judgments related to in-game actions. On the other hand, the player ought to judge the representational content of *SimCity* by comparing it to their understanding of what the procedures governing urban development are like in their day-to-day life and how those procedures affect the behavior of actual people. For Bogost, "the ontological position of a videogame (or simulation, or procedural system) resides in the gap between rule-based representation and player subjectivity; I call this space the 'simulation gap'" (2007, 43). The question is not 'why do games matter for players' but 'why games ought to matter for players'. Games ought to matter for players because the gap between the game and the player's understanding of a complex system in the world is worthy of the player's critical attention. At the heart of the design process is the representation of a system through computational logic. The critical purchase that this account of procedural representation affords the game designer (along with the player who muses over their message) is then put at centre stage through the neat analytic framework of the simulation gap.[6]

The key conceptual difference between Bogost and the politics of skill pertains to the role implicitly prescribed to the designer and the player in the model of political significance described. In *Persuasive Games*, the designer is positioned in relation to the world in the stance of an observer before a complex system. The practice of game design is described as one of modeling sets of relations between units through computational logic (Bogost 2006). The role of the player is in turn reduced to the *post hoc* reflection upon the game. Reflection is the mode of experience that bears the weight of political import. Memory itself is reduced to reflection—thereby obviating the role of embodied memories in skill deployment and uptake or spontaneous memories arising from affective, associational forces[7]—and design is considered as a relation to the world rather than a relation to the collective experiences of others who have similar experiences of computer systems.

Crary's historical observations suggest that design can be thought of as a matter of grasping both the embodied situation of the viewer and the modes of attentiveness that the viewer would bring with them to the scene of cultural consumption. Designers, on this account, model experiences by creating situations. The situation we call cinema is not a representational system modeled on the world but rather a configuration of architectures, images and bodies that draws those bodies together by putting them to work. Work must simply be considered in an expanded sense of the work of learning, adapting, and modifying capacities for information access and manipulation. In this light, we might imagine the spectator at play in Crary's historical account in terms of the symbolic milieu of nineteenth century visual culture that existed as the matrix of image consciousnesses constituted by private experiences of distributable image-based media.

Barney and Lazzarato force us to conceive of technology use in terms of self-delegated tasks of software use that constitute the shared experience of a generation of computer users who are familiar with common features of data management and communications software. The player and designer, considered as members of such a generation, does not play the role of an active spectator revisiting the enactment of a rule set; they are rather focal points in an expansive collective project of cultural production in which the manipulation of information takes place according to gestural repertoires and forms of mental synthesis that are peculiar to a specific genre of information bearing structure. The player is put to work in modulating and adapting their existing experiences with a move-look interface, thereby informing that experience through the skill acquisition process special to the ludic scenario at hand. The only reason this interface works is that the designer is there to shape the next iteration of this basic UI into a platform for the (re)deployment of these skills.

Manipulating information mounted in a 3D simulation is as much the handling of a new iteration of a set platform specific skills as it is your private musings on the critical content found in the simulation gap. The political stakes of game design—as seen when focusing on the generationally constituted pool of skills emergent through the connection of design, device and play—are immanent to the experience of play because that experience is the event through which the individual is connected to the historical emergence of a form of information access and manipulation. The formation (both through design and use) of 3D simulations and their move-look UI proves the existence of a malleable potentiality inhering across geographically and chronologically dispersed instances of individuals' using computer system, and using those systems in ways that deploy, alter or depart from existing practices of interacting with software.

The role of the designer and player, upon this account, is more akin to the construction of situations in which the boundaries of a shared experience of various interfaces and graphical tropes is subjected to a kind of collective testing. Those interfaces are tested, with every new design, in the sense that they potentially afford new means of engaging with information as well as presenting the possibility of breakdowns. Information designed with the subjective and malleable existence of these skills in mind may or may not afford traction to the user who attempts to gear into a given configuration of image, device, and sensation. By focusing on how designers have tested the boundaries of these potentialities for collective skill uptake within the realm of the well refined design practices of minimalist sculpture, we can see how games like *Memory* are tapping into and manipulating changes in the collective experience of content carrying platforms (rather than mounting claims about the world on a medium with specific representational properties).

MINIMALISM AS EXPERIENCE DESIGN

The writings of art historian Michael Fried and of minimalist sculptor Robert Morris are concerned with the experience of art objects and with the nature of the relation between artistic practice, material culture, and perceptual experience (Fried [1967]; Morris [1966a, 1966b, 1967, 1969]).[8] Within these texts, detailed accounts of production processes, designed materialities, and phenomena of perceptual experience are brought to bear upon the possibility of designing for the production of states of consciousness during which an awareness of the lived experience of spatial orientedness becomes heightened. In addition to defining both the spectator and the artist as subjects testing or experimenting with the malleability of perceptual phenomena, these texts also describe designed objects as experiments in the availability (during or through embodied experience) of a sense of the subject's connectedness to the historical existence by which information bearing structures have taken form through long histories of shaping and using materials.

For the purpose of our discussion of *Memory* and of the politics of skill, these texts prove useful for several reasons: for their insight into experiences of self-awareness that cannot be characterized as reflection (or a kind of *post hoc* critical attitude); for their consideration of the essential function of the body as an material existence geared into and manipulating a world rich in information; and for the insight they provide into the meaning that objects bear not as containers for messages but as material testaments to the history of the practices of production and use that inform their shape and functionality.

In a series of short articles published during the mid 1960s, Morris describes his ambitions as a designer of experiences ([1966a]; [1966b]; [1967]). To explore his interest in the perceptual experience of sculpture, Morris developed a textual account of the relationship between sensation and orientedness. He first points to the bare forms and materials of minimalist sculpture—which he describes as "simpler regular polyhedrons", like cubes and pyramids—in order to describe the relationship between sensation and the perception of " 'unitary' forms" ([1966a], 6, 7; Figure 4). For Morris, a simple three-dimensional shape with modest colouring and non-decorative finishing can produce an effect he calls "gestalt sensations" (1966a, 6). By *gestalt sensation* Morris means a perception of the entirety of an object's physical existence as given in experience without its being explicitly there in what is actually sensed as colour, texture, etc. In seeing a simply wrought cube, I have in the sensation of the cube's colour, shape, texture, and weight a perceptual experience of the as yet unseen sides of the object and the potential for elaborating these sides, colours, and textures in explicit sensation where I to move around the object, touching it, and glancing at its sides as they reveal themselves.

Figure 4. Robert Morris, *Untitled*, 1965.

Morris's argument is that the simple shapes of regular polyhedrons create optimal conditions "for the sense of the whole, the gestalt, to occur" ([1966a], 6). In contrast, complex shapes tend to produce the experience of relationships that are internal to the structure of the object, such as the relation of a bright colour or a fine finish to an aspect of a form. A highlighted feature of a simple object sets up relationships between parts of that object rather than simply allowing the unified object to stand in relation to a spectator. The claim is that the muted colour, even finish, and simple shape of the minimalist sculpture creates "maximum awareness of the object", an "awareness of oneself existing in space", and the experience that "[o]ne is more aware then before that he himself is establishing relationships as he apprehends the object from various positions and under varying lighting conditions" (Morris [1966a], 4; [1966b], 15). Rather than relations between parts internal to the structure of the sculpture, the spectator is conceived as a mobile actor who creates relations between their body, objects, and ambient space through the use of assumed abilities such as bipedal self-motion. The self-awareness of the body's role in the perception of continually new and changing horizons of potential movement is heightened through the production of conditions optimal for the self-conscious testing of the ability to orient the body in relation to smoothly apprehensible polyhedrons.

Most pertinent to our concerns is the production of states of awareness that highlight the relational process by which bodies and things in the world interact. These states are not produced from nowhere, nor are they guaranteed by any one configuration of objects and bodies. Instead, I suggest that we think of the minimalist cube as an experiment in the production of such experiences that relies on the designer possessing an intuitive sense of how to decouple the participant from habits of use that are sedimented in that participant's perceptual experience and in the very material form of the objects that they interact with.

The minimalist cube is not inherently productive of a heightened self-experience of the perceptual phenomena of potentialities of sensation unfolding during processes of spatial orientation. Nor are the fractured architectural structures of *Memory*'s 3D space inherently disorienting. Instead it is the difference between the clear, fully formed space of many 3D simulations and the dizzying shards of splintered shape in *Memory* that may produce an experience of a kind of self-reflexivity that emerges from a stuttering in

space. This stuttering points to the history of how the move-look UI and 3D simulations have been put to use throughout the history of computer gaming. That is, the level design of *Memory* (which is also intimately tied to its disorienting graphics) is not simply a matter of balancing the opacity of space with the clarity and placement of cues that allow the player to progress through the game. The level design and graphic design are experiments in the possibility of a player deploying the skills for move-look navigation (which they have developed across various contexts of digital ludic culture) within a situation that forces them to be aware (in a very situated or embedded sense) of how they deploy those skills in the situation at hand.

The relation between play and world is negotiated during stuttering move-look activities, not afterward upon the appraisal of an analogy between the game's procedural rhetoric and the operations governing an isomorphic system in the world. To play *Memory* is to be situated within an experiment that implicates the player and the designer in the process by which information, humans, and machines are implicated in the possibility of bearing information in different shapes, putting the body to use otherwise, and sedimenting these relations in new forms of made things. The deployment of a skill is the operation by which these terms come into relation. The politics is in the stutter not the contemplative pause. This stutter betrays the stakes of a collective process well beyond the conception of a well-balanced design. These stakes are those of a possibility: that of shaping our relation to software in ways that embed us in a world that could not exist without players and designer building worlds besides those of drop-down menus, big data, and private messages.

Furthermore, both *Memory* and Morris's cube (through their similar experimentation with a form of situation-dependent awareness) are also inserting the cultural participant into a situation in which their experiences are implicated in the artwork in such a way as to render ambiguous the categorical separation of body in motion and object in environment. In 1967 historian and art critic Michael Fried produced a scathing essay denouncing minimalist art. Yet besides his critical appraisal of work by Morris (which I leave to one side here), Fried provides a valuable elaboration of the terms established in Morris's writings (Fried 1967). For Fried, the minimalist sculptures of the 1960s were primarily concerned with the production of experiences in which subject/object distinctions become ambiguous during temporally distended processes of art spectatorship.

The minimalist sculpture presents itself as a presence with which the spectator must relate; this is, at base, what Morris is referring to when he speaks of awareness—that is, according to Fried: "Something is said to have presence when it demands that the beholder take it into account, that he take it *seriously*—and when the fulfillment of that demand consists simply in being *aware* of it, so to speak, in acting accordingly" (Fried 1967, 128, emphasis in original). The activity of orienting oneself in relation to the polyhedron is an acknowledgement of the strange presence of this object. The sculptor's art is designing a situation in which this activity of movement in relation to an object "simultaneously makes him [the spectator] a subject—makes him subject—and establishes the experience itself as something like that of an object, or rather, of objecthood" (Fried 1967, 135). The spectator is subjected to the object and this same spectator is in turn made aware of that relatedness through an activity that amounts to the objectification of their perceptual experience of movement *in situ*. Being presented with this odd presence means moving in accordance with the dictates of an inanimate thing.

In Fried's statement there is an odd agency. The object that can "demand" and the spectator "acts accordingly": a flip in the circuits of agency at play if the moving subject were considered to be the sole actor in the situation (Fried 1967, 135). The orientation of the spectator is the fulfillment of an incitation coming from an object (or its designer?) that then makes that activity of movement the content of the work. The artwork, which is an objectified experience, is the self-aware process of entering into dialogue with a simple shape and thereby enacting a play between movement and the incitation to move.

Fried's reading of Morris is focused on the idea that awareness is awareness of situated self-experience. Awareness is not a distanced relation of subject to self, but the experience of a situation as that which necessarily implicates movement in a process of information access and manipulation. Fried also points out that to conceive of an artwork as an experience, and to conceive of awareness in these terms, is to undo the boundary between artwork and the world of quotidian objects. For with "Morris's gestalt or unitary forms […] one never feels that one has come to the end of it; it is inexhaustible […] the beholder is made aware of the endlessness and inexhaustibility if not of the object at any rate of his experience of it" (1967, 143-144). Without the bounded shape of an object defining the parameters of the work, and without the subject defined as an interior regarding that work as something exterior, the boundary between the experience of the object and the experience of just about anything else is blurred.

Though this may be problematic for someone concerned with the sanctity of the art object, from the perspective of experience design it is a tantalizing provocation to consider the built world as a set of arenas built to stage and modulate the qualitative register of experience and couple things and bodies into an ongoing and dynamic dialogue without end. Moreover, it is a provocation to consider (given this experiential leveling of a multiplicity of relations) what makes the experiment (which is implicit in design practice and in the practice of play) artful?

If we recall the dialogic set up by Bogost to explain games design—the designer or player asking of a complex system "*how does this work?*" (Bogost 2007, 8)—we can now rearticulate this exchange in term of the perceptual testing involved in engaging one's abilities within a game and the experimentation involved in putting a game in the world. The player of *Memory*, in getting through the game, is asking 'how is it that I'm able to get this system working'? The answer, the question, and their politics are all immanent to act of play: by playing, I implicate my body in the constitution of this collective experience of move-look UI through the event of my capacity for orientedness in the world. I orient myself toward this and not that. I play at the task of actualizing this way of being toward the world and not others. We can think of Hansen-White as asking 'who could get this working'? The question describes design as a form of speculation. The speculative act of design suggests an intuitive understanding, on behalf of the designer, not just of the learning curves involved in gaining the skills necessary for playing *Memory*, but also of the generational and embodied memory that must be at work for a player to get through the game. The gesture of placing the game is the political act. The politics of this act are its intervention into the flows of activity that take shape at a collective level of multiple, geographically and chronologically dispersed instances of play—not the private act of critique that separates out the world of play from the outside world. For, as we have seen with Barney, the world of work ('out there') and that of play (for me) are embroiled in the same transformation in the nature of work itself within networked, software-oriented societies. Design is artful when its suggestions, its experimentality, transforms.

For Morris the experience of information bearing forms unfolding through movement as horizons of potential sensations (and of the co-constitution of situations by moving bodies and things) is inextricable from a wider set of material conditions. In extending his theory of minimalist sculpture beyond concerns related to sensation and movement, Morris explains that the polyhedrons of minimalist sculpture are inextricable from a long history of technical objects and manufacturing process. Particularly with reference to cubes, Morris suggests that this shape has emerged from the history of "forming itself" (by which he is gesturing toward the total human history of making shapes from materials) and from the "constant conditions" of the Earth's gravity as it affords the stacking and transportation of rectilinear things ([1967] 27, 29, 27-33):

> There are many things that have to come together to contribute to making rectangular objects and right-angle placement the most useful means of forming. The mechanics of production is one factor: from the manufacture of mud bricks to metallurgical processes involving the continuous flow of raw material that gets segmented, stacked, and shipped. The further uses of these "pieces" from continuous forms such as sheets to fabricate finished articles encourages maintenance of rectangularity to eliminate waste (ibid, 28).

The minimalist cube, in that it is often created outside the gallery using technology of mass production, takes form not only as a horizon of potential sensation but also as the formation of a unit that has shape because of a system of relations between materials, production processes, and conditions governing the practical assemblage of formed matter. Surely the cube is information for the spectator's orientation in space when taken as a component of a shifting situation. But crucially and in addition to spatial orientedness, when taken as a manufactured object, the cube is a form that has emerged from the sedimentation of practices of making matter useful. Orientation, and the ongoing fluctuation of the moving subject's awareness of the dialogue of body and world, is then (within this discourse) always both temporally distended, situational, and inextricable from a lived history of made things.

At a basic level, *Memory* builds a game mechanic out of the attitude of testing that Morris describes in terms of the perception of simple shapes. The graphics and move-look UI simply stage this process of spatial orientation in such a way as to complicate it through perceptually disorienting graphics. But considered as a historically contingent material configuration, and with the game's first stage (within the command line emulation) in mind, *Memory* is an encounter with the collective memory of a generation of computer users. *Memory* incites the player to return through manifold circuits of embodied and archival memory by implicating these various fields of shared experience in the performance of platform specific activities of information access and manipulation. *Memory*, and the possibility of using it, is informed by a long history of computer use put to work for the purpose of play. The commercial pressure to reproduce past forms of move-look UI encourages the maintenance of certain graphical and UI conventions to eliminate presumably unpalatable play experiences. But *Memory*, despite this, suggests the existence of an expansive openness to change inhering in current state of the play community. It posits the potential for the actualization of years of experience and thousands of hours of production through a single encounter with a computer system.

Memory focuses a generation's worth of energy expended on exploring 3D worlds into a single encounter, and it opens up this expenditure to new trajectories of use and new forms of interacting with information. To reorient the way we move and look is to stake a

claim to the role of a generation of players in the transformation of a computerized society. To design for this reorientation is to take the activity of play in hand and posit its politics as an event immanent to that act itself rather than one following the dictates of a wise, absent designer who packages the world for the sake of private reflections.

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ENDNOTES

[1] For the demo of *Memory*, see: http://www.datatragedy.com/wipmoabd/

[2] The importance of conceiving of all forms of embodied activity as forms of information access and manipulation is described by Mark Rowlands in *The New Science of the Mind* (2010).

[3] For the Computer Hope page that I used to pass the first stage of *Memory*, see: http://www.computerhope.com/msdos.htm

[4] For a YouTube walkthrough of the *Memories* command line OS stage, see: http://www.youtube.com/watch?v=6G_IU5lK1E8

[5] For a detailed exegesis of the conceptual terrain of systems theory (one that takes into account a great variety of historical material not found in Bogost's work and that is very useful for considering the potential of systems discourse to contribute to our understanding of imbrications between human and non-human actors in hybrid system-environment constructs) see, Marc Hansen (2009, 113-142).

[6] The productivity of Bogost's approach is evident in many games associated with the serious games movement, such as those of Molleindustria's *McDonald's Game* (2006), to name but one of many dozens of instances. The movement has also gained traction in academia and social justice organizations, as evidenced by the design of Tim Lenoir's *Virtual Peace* (2012), Katherine Hayles's *Speculation* (2012), and many of the work produced for the Games for Change Festival.

[7] For a detailed account of various different forms of memory, and their respective roles in the production of perceptual experience, see (Husserl [1920-1927]; [1893-1917]). For a longer description of the model of memory at work in Bogost's writing, and for a more detailed elucidation of how a Husserlian account of memory is at work in the design of games set in simulated 3D spaces, see (Lockett 2012).

[8] My continued emphasis on the situational character of perception is meant to accentuate the concepts actually given in the art-historical discourse of perception. Maurice Merleau-Ponty provides an account of the situational character of perception in *The Phenomenology of Perception* (2012), and Dawna Schuld has demonstrated the relevance

of the term *situation* to the art of the 1960s and 1970s in her history of "situational art" (2010, 221).

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