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games

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PLATFORM STUDIES AS METHOD FOR THE CRITICAL HISTORICAL STUDY OF ELECTRONIC GAMES?

Raiford Guins

Abstract: *“What is the research value of a platform studies approach for the writing of game history?” This is the question that I assign to students enrolled in my Game History course each year. In this short reflective piece, I “take the test” like my students to discuss platform studies as a method for historical study.*

Key Words: Atari VCS, Platform Studies, *Racing the Beam*, Graphic Design, Industrial Design

Stanley Fish once turned his student’s innocent question into a famous book title, *Is There A Text in the Class?* On a smaller scale – not to mention feeling like a minnow in comparison – I too have drawn from a question raised in the classroom. Since 2010, I have taught CCS/DIA 396 Game History at Stony Brook University. This semester-long course is divided into four parts: Epistemologies of Electronic Games, Electronic Games in Public and Domestic space, A Platform Study of the Atari VCS, with the fourth part devoted to a recent topic related to game history.¹ I do not teach a survey on the “history of games”. We spend fifteen weeks wrestling with the practices and problems of writing about and documenting games as history. Part 3, devoted to Platform Studies, is taught as a “case-study-within-a-case-study”. We learn from Nick Montfort and Ian Bogost’s (2009) own case study of the Atari VCS platform while treating their landmark book, *Racing The Beam: The Atari Video Computer System*, as a case study of a possible method for doing game history.²

The question that I have adopted as my title to this brief article grew out of the first time teaching *Racing the Beam*. I encouraged my students to collaborate with me to turn our experience of reading the book into a project that we would all enjoy working on and from which we would benefit intellectually. I did not have my class read nearly every page with a preconceived form of assessment ready-to-hand (this was before administrators imposed draconian learning outcomes on academics who used to enjoy teaching). Here is the short question that we generated: “what is the research value of a platform studies approach for the writing of game history?” My students are asked to explain “how” a platform study might offer us critical insights into the history of games as opposed to surveys, non-methodological, and especially non-critical works that have largely defined game historiography.

I enjoy reading these short papers each year. They provide a little window into whether or not my students are learning to think about the history of games – especially how it is written – as much more complex, demanding, challenging, rigorous, and rewarding than the ever-present time-line on game history will ever be. I also want them to feel the intoxication of the historical study of games like their professor. In that spirit, it seems only fair for me to “take the test” – reminiscent of when Rachel asked Deckard if he ever took the Voight-Kampff empathy test from *Blade Runner* – and respond to the question that they have to think about each Fall. My plan in responding to this question is to reflect on how I teach *Racing the Beam* to then share my brief thoughts on the

question in relation to my own research. Here goes.

We kick-off our discussion of *Racing the Beam* backwards: we transform the book's "Afterward" into a "Preface" in order to understand the concept of a "platform" as well as the aims and goals of a "platform study" as articulated by the book's authors and book series editors. We spend a great deal of time working with the "five levels of digital media, situated in context" figure/chart – Reception/Operation-Interface-Form/Function-Code-Platform – that visualizes established and emergent practices for studying video games (with the platform level being emergent at the time of the book's writing³). We seek to contemplate the heavy lines demarcating each modular epistemological frame as porous rather than rigid. We arm our thinking with an understanding of what a platform entails, what a platform study aims to accomplish, and start to consider how diverse historical, social, economic, and cultural contexts can be brought to bear on "the doing" of a platform study.

We warm to a neat definition of "platform studies" offered in a companion piece authored by Bogost and Montfort with the delightful title, "Platform Studies: Frequently Questioned Answers" (2009). Under the final section entitled, "Our Concept," they write, "Platform studies investigates the relationships between the hardware and software design of computing systems (platforms) and the creative works produced on those systems [...]" (p. 5). Each chapter of *Racing the Beam* supports this claim well as my students gain invaluable insights into "why" Atari's game programs look and play the way they do.⁴ In fact, they stop laughing at Atari's *Pac-Man* (even *E.T.: The Extra-Terrestrial*) once they gain an appreciation of the technical conventions and constraints of the Atari VCS as a platform. To further support this understanding of the creative (and challenging) process of programming for the Atari VCS platform I find it incredibly valuable to have my students hear from those who did it: we watch Howard Scott Warshaw's *Once Upon Atari*, two-hours of interviews with former Atari employees. Tod Frye's surly line about "mangling some coin-op game" to port a successful title (e.g. Namco/Midway's *Pac-Man*) to the Atari VCS is really an eye-opener for my students while introducing another level of constraints beyond the technical. Montfort and Bogost make good on their claim to connect the platform to other constitutive levels so that my students learn that corporate (mis)management (e.g. intentionally over-producing *Pac-Man*, its development restricted to 4K ROM) as well as financial constraints (e.g. the absurd amount paid to Spielberg for rights to *E.T.*) also shaped the games that we play.

From these introductory lectures we proceed to move chapter-by-chapter. I pair the chapter on "Combat" with a lecture based on my research devoted to Cliff Spohn who established the artistic standard for Atari's consumer electronics division and is personally responsible for nearly twenty box covers for the VCS, artwork for 400/800 computer software titles, and one coin-op machine (*Atari Soccer*, 1979).⁵ Such a lecture is included for a number of reasons. Montfort and Bogost also (albeit briefly) engage with box cover artwork and packaging in their discussion of Activision (Chapter 6 on "Pitfall!") and I find it useful to establish Atari's branding style at length before examining how the new company drew from Atari's established packaging style to promote its own form of game cartridge packaging (a style less indebted to Atari's box-cover image realism than illustrative of in-game graphics). I place Atari's packaging within the historical context of late-1970s commercial art forms such as movie posters and LP sleeve design to help evaluate how the new medium of an interchangeable ROM cartridge attempted to compete with older and long-established media forms and their accompanying graphical formats used in advertising.

In addition to the above, we compare the graphic design of cartridge boxes for the Atari VCS with artwork utilized on Atari/Kee Games coin-ops. Here we see a radically different graphic design sensibility applied to products housed within the coin-op

division compared to Atari's consumer products division. We ask: What role did location play in influencing these different graphic design practices and styles? What is the relationship between the graphic design of a game cartridge box and the game it contains? Lastly, by offering a lecture and readings on Cliff Spohn we are also able to consider the role that other forms of creative labor – not just programming – played in helping to shape products for Atari as well as user experiences with its products. Those single images adorning the face of Atari's cartridge boxes had a lot of work to perform upon their release to tempt potential customers with depictions of imaginary worlds and now serve to evidence the role that artists played in helping to establish the Atari brand. Moreover they surface a design process that has received little attention in the field of graphic design as well as game history.

Pairing different materials, contexts, and histories with the deep examination of the VCS platform continues with the remaining chapters in *Racing the Beam*. For the chapter on "Adventure" we discuss the experience of playing text-based adventure games while also delving into the graphics and social experience of tabletop role-playing games (e.g. *Dungeon and Dragons*). The chapter on "Pitfall!" maintains this emphasis on the social in a lecture on the construction of a "gaming community" that Activision created via its Activisions newsletter (along with the company's World Record Scores sew-on patches like the "Save The Chicken Foundation" for high points achieved on *Freeway*). We also learn about significant court cases that made it legal for a third party software provider to produce products for the Atari VCS (the history of games is in dire need of historians of law). We then turn our attention to "Pac-Man" with special interest in *Racing the Beam*'s examination of the game program's "flicker" problem. An important question for me – that I think *Racing the Beam* addresses very well – is how to position a game's "flaws" or "failure" not as a reason to reject or ridicule the process of development or even the developer but to address these circumstances within a techno-historical context. Examining the porting/translation process of *Pac-Man* is an excellent means to address such a context. Equally, and given the age of my students, it is increasingly important to not just say that *Pac-Man* was a "cultural sensation" but to demonstrate this important aspect of the game's history and longevity. This is the perk of curating a game collection. I am able to bring in the Milton-Bradley Co. Pac-Man board game as well as a number of other tie-in products to evidence the game as a phenomenon. An additional topic that receives a good deal of lecture time is the role of the coin-op game in the early 1980s. It is imperative to communicate that the medium of the coin-op was the reigning standard of game play and that it served as content for consumer product translations long before other media like film.

I conclude our "case-study-within-a-case-study" by building out combined chapters on "Yar's Revenge" and "Star Wars: The Empire Strikes Back" into a series of lectures devoted to Atari's *E.T. The Extra-Terrestrial*. I apply many of the concepts from platform studies to an analysis of Warshaw's game and layer the various constraints – financial, developmental, technical, translational (e.g. film to game), social – that influenced as well as impaired the title's success. We are particularly interested in studying how the game itself was promoted via the new industry of video game magazines with ample time spent reading reviews of the game from its original era of release in contrast to the vitriol of contemporary perspectives on the game. Here I am appealing to the level of "Reception/Operation" to understand how exactly the game was received upon its release rather than have the persistent negative tide of reviews from the present over-determine the past.

This reflection on how my game history course studies *Racing the Beam* does not regard these other contexts of focus as "supplemental" to a platform study of the Atari VCS. Rather I regard, not to mention teach, such contexts as complementary to a platform

study project. When we speak of “context/s” we do so by regarding the Atari VCS as doubly constructed: we study the formative contexts that helped to shape/situate the Atari VCS as a platform and the contexts that it shapes.

A platform study brought my class to the artifact; it allowed us to engage with computational architecture, Atari’s culture of software development, and the creative measures employed to build games via hardware constraints of the VCS. To study a video game system from the orientation of engineering and its operation has enormous merits for our understanding of the system in question and the games that it runs. These facets would have been grossly neglected by the contexts – largely cultural/design history, business history, and social experience – that I have personally paired with my class’s reading of *Racing the Beam*. Paired by the rational structure of a course syllabus we are able to occupy a number of different perspectives from which to contemplate the Atari VCS as a historical artifact.

Given this and to return to the class assignment, I agree with the bulk of student essays that argue that a platform study provides great value to the historical study of games while expressing a cautionary tone that such a study in isolation from the various “levels” cannot assume a historical study, not even one devoted to the history of technology (as that field rarely holds a technological artifact in isolation from dependent and contextual histories). My students fully grasp that Montfort and Bogost are not, in any way, advocating for such a singular concentration that would warrant the charge of “isolating the VCS platform from other contexts” as clearly and convincingly articulated in their “Afterward” (or, in our case, “Preface”). They do, though, want to engage with the challenge of working with a platform studies orientation across multiple contexts and as a means of doing game history to test its conventions and constraints. They endeavor to speculate about the connections between “technical specifics”, history and historiography.⁶ As a student once wrote, “just because a platform is old, doesn’t mean that a platform study is interested in attending to questions of history.” An important point here is that the question of how a platform study can serve as a historical method is reliant upon the types of questions that a researcher interested in history would ask of a platform. For example, a researcher examining the MOS 6507 chip used in the VCS may want to build larger contexts from which to study this particular part of the hardware in conjunction with establishing its function. A history of microchip production in the mid-to-late 1970s would certainly be of interest to such a researcher as would a broader engagement with the rising tech industry of Silicon Valley in this era. The VCS then becomes part of a much larger history of computing. It is easy to see cultural, business, local and global histories emerge that can wrap around the study of the VCS as a platform. The platform, in this scenario at least, is studied for its technical components but is also a magnifier to help bring other related areas of interest into focus. Many different orientations are put into conversation.

In closing I want briefly to touch upon my current research on game history and discuss what I take to be a complementary arrangement with platform studies though, in a way, that may appear utterly odd, if not at odds. In addition to starting with *Racing the Beam*’s “Afterward” I also disassemble an Atari VCS in class (it is secured only by four screws). I do this for a number of reasons. I want to translate the VCS’s design schematic from a Powerpoint slide into an actual PCB housed within the plastic console assembly. Schematics are abstract and mean little to those without an engineering back ground. So I give my students the end product of such abstraction. I also want to show how the board physically connects with the console’s interface including input device ports. Literally and metaphorically this demonstrates an observable relationship between a machine’s guts and its industrial designed plastic dermis. And, finally, such an action performs a hands-on, personal experience with technology, the need to disassemble/reassemble in order to

occupy – even if momentarily – an orientation to gain necessary technical insights. Placing the PCB behind me on a table, I then ask one question: why is the plastic body of the console so much larger than its circuit board? My students have already sat through a lecture on coin-op cabinet design and one devoted to understanding the domestication of gaming devices and the role that industrial design played in this process of familiarizing “TV-Games” within the U.S. home of the late 20th century. We discuss the affordances of different design attributes across numerous gaming devices and spend ample time examining where such devices would be physically located within the home. I like to flip over consoles to point to the little rubber stoppers that help stabilize the artifact on a smooth surface like a coffee table. And students – via direct in-class interaction with game artifacts – discuss the “awkward” social relation of twisting a knob so close to another student when playing on a 1976 Atari Pong system. We talk about the poor design model of hardwired controllers, examine the built-in storage space for game cartridges of the Bally Professional Arcade, ponder the sensibility (or cruelty) of disc controllers on the Mattel Intellivision, and work to understand how the word “computer” served as branding for many game systems (especially those like the Magnavox Odyssey 2 with a membrane keyboard). So when confronted by the oversized empty “hull” of the VCS I hold up in front of them they tell me that its form is due to aesthetics (to look “good” in the home) and that its size signals something “substantial” to help justify an investment in hardware that will also require multiple purchases of software titles (then a new consumer practice).

If I am to understand the “platform” as “the hardware and software design of computing systems” (Bogost and Monfort, 2009, p. 5) that in this exercise rests behind me on the table, what am I holding aloft and why does this matter for the historical study of games? I opened up the “black box” as platform studies encourages yet I am not solely interested in its contents. It is the “box” itself that commands my attention: an end product of industrial and interaction design. *Racing the Beam* does touch on the industrial design of the VCS as this is not a primary focus for platform study. Its language, one could argue, is not geared to such a sustained consideration. Metaphors of “depth” pulse through the language of platform studies. The “[...] serious scholar of digital media might need to delve deeper into the material construction of software and hardware” (Bogost and Montfort, 2009, p. 5). Or, platform studies as a method purports to “dig down to the code,” or “to the metal” in its vernacular.⁷ And the very way of visually conceptualizing a platform – again referring to the chart from *Racing the Beam* and published on the Platform Studies webpage – in regards to other levels of game study occupies a foundational level “beneath” all others. It is fair to say, then, and this is not a criticism, but an observation of a specific organizational apparatus, that the platform, rightly claimed as neglected, has shifted status from overlooked to fundamental importance in defining “the game” and modes of its analysis.

My research occupies an opposite sphere. I consider it “superficial” in comparison to platform studies emphasis on depth. Calling my research “superficial” also runs the risk of it not being regarded as “serious scholarship” if such an endeavor is defined in terms of “depth”. I scale surfaces made of wood, vacuum formed plastic, glass, cardstock and fiberglass: forms molded and adorned to help constitute the game as well as the experience of play; forms anything but neutral, far from uniform. I have long held historical interest in graphic and industrial design of games—consoles, cabinets, and packaging. Some of my research interests on these topics have surfaced in article form and in *Game After: A Cultural Study of Video Game Afterlife* (2014). My next book, *Atari Modern: A Design History of Atari Coin-Op Cabinets, 1972 – 1979* will be a marriage (a happy one I hope) between design history and game history. A platform study of the Atari VCS, or to speak to my research interests, the company’s coin-op games, would not help me

get to the surface of where I want to be. That's about molded plastic, ergonomics, visual communication, industrial and interaction design, not "the metal".

While I do not think that this work would be, or even needs, or wants to be, considered platform studies, I do think that there is a mutual benefit for the design history of games that I am invested in to form a friendship with platform studies which may of course have already happened. We would be able to talk exteriors and interiors. Game history would win big as would design history given its current neglect of video games.⁸ And I think that this "level", one that does not presently slot well into the existing configuration, would be one means of working towards a "full platform study" that Bogost and Montfort argue "will also consider how the platform came about in its particular shape, and how that particular shape later influenced how and what later things were brought about" (2009, p. 5).

So instead of squeezing my research interests in design history (the field) and the history of design (the subject) into "that chart" I'd prefer to visualize all of these "levels," including mine, in the form of a Venn diagram. For me the Universe is game history so that unions, complements, even differences of diverse sets can be configured into useful and exciting intersections between all levels for the writing of game history without the need of any foundation, core, or hierarchy. We could simultaneously manage micro and macro histories, work within specific sets of knowledge while seeking unions with others. A platform study teamed with design history, therefore, would continue to take us under the hood while not forgetting aerodynamics.

Notes

¹ Topics have included: The Preserving Virtual Worlds Final White Paper Report, the Smithsonian American Art Museum's The Art of Video Game Exhibition, the excavation of the so-called "Atari Landfill".

² I am only going to focus on *Racing the Beam* because it is the platform series book that I know best on account of teaching the book for so many years. The 1970s is also a major decade of interest in my own research in game history. I am well aware that Montfort and Bogost do not limit platform studies to video games but, given the above, I will for the sake of this short essay.

³ It is very fair to say that a "platform study" approach to the study of video games – if not computational technology in general – has successfully and influentially ascended to a position of acceptance in a very short period of time. The book series is less than ten-years old with *Racing The Beam* being its launch title in 2009.

⁴ I have intentionally kept this in the present tense because we play each game examined in *Racing the Beam* on an Atari VCS in class and these are first encounters with game programs developed in the late 1970s and early 1980s for my students born into the world just before nail-clippers on airplanes signaled a happy past.

⁵ This was actually news to Spohn when I recently informed him about the coin-op machine.

⁶ I have placed "technical specifics" in quotations to draw attention to Bogost and Montfort's corrective to the charge that "Platform Studies is about technical details, not culture" (2009, p. 4). Their retort is that their project is about "the connection between technical specifics and culture" whereas my class wants to not just swap the word "culture" with "history" but to place both "technical" and "culture" within historical considerations.

⁷ See "Home" @ platformstudies.com

⁸ Is it permissible to regard platform studies as part of Design Studies, Design Culture, and Design History? If so, we would have to understand "game design" as more than

software development.

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