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Video Arcades and the Politics of Commercial Space

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Video arcades are dying everywhere, incompatible with contemporary regimes of commercial space. The famous Chinatown Fair arcade in New York City was once home to many narrow rows of arcade cabinets, inhabited primarily with sweaty, competitive players, gathered in dim lighting and discretely drinking malt liquor. In 2011, amid considerable fanfare, the arcade was closed due to financial difficulties[11]. As it turns out, the quarters deposited by hardcore gamers could no longer offset the costs of machine maintenance and New York real estate. There was a time when video arcades were considered a threat to the fabric of urban space, and entrepreneurial operators were accused of luring youth into truancy and addiction.[2] Today, it would appear that these moral objections have been eclipsed by simple economic facts. And yet, arcade spaces have not disappeared completely. The Chinatown Fair has reopened, putting its space to new use, with a new approach to business. The arcade is now well-lit, spaciously arranged, and oriented towards non-video games, like air hockey, that encourage casual play. What is it about video arcades, like the old Chinatown Fair, that once provoked moral panic, and is now economically unsustainable?

The rise and fall of video arcade gaming is a story of antagonistic encounters between establishment and countercultural actors, played out in a series of commercial spaces. Tracing the early history of this interaction reveals precarious arrangements between military contractors, organized crime and student radicals. Video arcades could not survive because they arranged players' bodies in space according to a rationale that was incompatible with that of dominant institutions. This is especially true in the case of the earliest commercial arcade games, Nolan Bushnell's *Computer Space* and *Pong*. The politically ambivalent origins of video arcade gaming were subsequently made manifest in the arcades themselves, and in the moral controversies that surrounded them, before newer, less contemptuous forms of video gaming provided a sort of resolution in the late 1980s and 1990s. Today, video gameplay takes place overwhelmingly in networked space, in homes, and on personal screens, smoothly integrated within prevailing commercial and domestic arrangements. Revisiting the video arcade today, we see that it fell into decline because its spatial logistics were ill-disposed toward the broader cultural politics of commercial space.

In performing this sort of historical operation, I approach the arcade as a "strangely empty museum of the past,"[3] facilitating passage between the conditions in which it emerged and the world in which it ceased to be. The video arcade, in this treatment, is populated with traces of two competing organizational paradigms in space, in the economy, and in social life. Treating the video arcade as an artifact that documents these changes is meant to echo the work of Walter Benjamin, who identified the social significance of nineteenth-century Parisian shopping arcades as revealed during their 20th-century period of decline. More recently, Anne Friedberg applied the same rationale to a study of newer commercial forms, arguing that "the contemporary shopping mall now emerges as a comprehensible cultural space as it is threatened with its own obsolescence."[4] For Friedberg, writing in 1993, the mall was threatened by integrated shopping and amusement-park hybrids, as well as the looming threat of online commerce. In either case, moments of transition between regimes of commercial space reveal the departing system's significance, by highlighting dissonance between then and now.

The first moment of transition for arcade gaming involves a shift from military to commercial application of computing technology. The earliest civilian video games were produced by young computer enthusiasts at the Massachusetts Institute of Technology, in a lab with funding from the United States Office of Scientific Development and Research, and a background in World War II-era defense research.[5] The users called themselves "hackers", and tinkered with software obsessively, hoping to make their programs "extend the user's powers" in an "infinitely flexible" fashion.[6] In 1961, a group of these hackers organized themselves around a proposal by Steve 'Slug' Russel to make a science fiction themed video game on MIT's PDP-1 computer. Mobilizing a mutual fascination with escape into outer space, the students collaboratively produced a spaceship shooting game dubbed *SpaceWar*![7]

SpaceWar! enabled users to joyride defense-related technologies, repurposing high-end equipment to simulate escape from the everyday realities of nuclear brinksmanship and cold war. Playing *Spacewar!* produced a new type of gaming subject, paradoxically both counter-cultural and culturally integrated, institutionally affiliated with defense research, yet individually ambivalent.

SpaceWar! also took the hackers' power over powerful institutional tools, and helped to make it accessible to non-experts. In 1970, Atari founder Nolan Bushnell encountered *Spacewar*! while studying at the University of Utah. Very few campuses could have provided such an opportunity, but Utah's government-funded computer graphics research netted the university both a PDP-1 and a connection to the first iteration of ARPANET.[8] In 1971, Bushnell created a standalone arcade version of *Spacewar*! called *Computer Space*. In 1972, Bushnell left his job at Ampex, a company that produced radar equipment during World War II, in order to focus on producing arcade games. He convinced engineer Allan Alcorn to leave as well, and they began a company that would soon become Atari. Allcorn later reflected,

> "I probably would have stayed at Ampex for a long time had it not been for Nolan Bushnell. If you had a job at Ampex or Lockheed you were set for life. That was a career."[9]

The early days of Atari were characterized by a variety of subversive

associations. For Alcorn, who describes himself as a "24-years old ex-hippy, out of Berkeley, an anarchist, if anything," leaving Ampex was "a lark" influenced by "questioning of authority" and a fatalistic attitude towards the "threat of nuclear Armageddon."[10] If gaming at MIT was a way to repurpose Cold War infrastructure, gaming at Atari is a way to break ties more formally. The status quo that gaming called into question was a far-reaching set of projects. MIT, University of Utah, and Ampex were just a few of the players in a much larger military-industrial complex that emerged during the Cold War. These diverse sets of actors were linked to both everyday commerce and national defense initiatives through their mutual implication in what Paul Edwards calls a "closed-world discourse" — an institutionalized, yet implicit, plan to administer the entire planet as a closed system, with the goals of continued economic growth and social stability for the American way of life. In pursuing this project, Edwards asserts,

> "The globe itself was seen as a closed whole, a single scene in which the capitalist/communist struggle was the only activity and from which the only escape was the technological utopia of space travel."[11]

The administration, management and traversal of global space (and outer space as well) by information, materials, and personnel crucial to the closed world project assumed priority within this discourse. Video arcade gaming emerged from within this discourse, enabled by defense-related university projects, yet aiming to transcend them, both in-game and out.

Cold War-era military-industrial projects in a variety of sectors were also linked together by their mutual engagement with Norbert Wiener's theory of the cybernetic system. For Wiener, effective persistence against the forces of chaos would be best pursued through control of a system or organism "on the basis of its actual performance", watching for "elements which indicate performance,"[12] and integrating them as feedback. In Wiener's cybernetics, a system is iteratively revised, collecting feedback and using it later on to better achieve its chosen goal-state. During World War II, cybernetic approaches to anti-aircraft defense were decisive in facilitating Allied victory. After the war, cybernetic concepts were repurposed for the business world, and used to inform new managerial, social, and architectural practices.[13] In part to optimize commercial performance, in part to outlast competing Soviet

threats, American economic and social systems grew increasingly modular and flexible during this era. To collect the necessary feedback, government and business alike relied increasingly on what Friedberg terms "perceptual displacement" — moving life's activity into "quintessentially semiotic space", where tracking, control and adaptation are seamlessly integrated.[14]

The semiotic space of arcade gaming loops a player into a variety of circuits, where user data is collected by actors including arcade operators, property owners, and all manner of public and corporate agencies. In an ideal system, copious consumer feedback would be available to help increase consumption, while maintaining a large and reliable user base. Video arcade gaming, however, could not shake off its out-of-place character within its broader social and economic systems. The perceptual displacements and feedback collection regimes of video arcade gaming were not sufficiently integrated within the dominant projects of corporations like Lockheed or Ampex, nor banks, nor government institutions. Instead, arcade gaming plugged users into distribution systems monitored by "ex-hippies" like Alcorn and Bushnell, and even by organized crime. Alcorn recalls one business meeting, after releasing <i>Pong<i>, during which an arcade operator

> "[r]eached into his pocket and pulled out a pistol, put it on the table and said, 'You know, you're operating in my territory ... (as a natural result) the banks wouldn't loan us any money … Arcades, that's the mob. And so they wouldn't talk to us."[15]

Without backing from any bank, early operations at Atari were largely a cash business.

In later years, even after video arcades achieved significant market penetration, negative public perceptions persisted. Even when not associated with organized crime directly, many arcade operators treated gaming as one element in a broader business that included jukeboxes and cigarette machines, and worked heavily within pool halls— all businesses perennially associated with "urban blight" in the eyes of concerned neighbors.[16] While association with pre-existing spaces of concern placed video arcades under intense moral scrutiny, the inherent spatial logistics of arcade gaming presented an even more troubling scenario, though it may have been difficult

for critics to articulate at the time.

Arcade gameplay was appealing to countercultural youth sensibilities because it enabled departure from the alienating realities of nuclear threat and state domination, and because it simulated access to the semiotic spaces of threat-control. Upon the players' inevitable defeat, they returned to their pre-gaming spatial orientation, embedded once again within the commercial space of a bar, a mall, or an amusement park. These arrivals and departures, into and out of simulated space, allowed users to peer into the abstracted managerial space of closed-world management, to purchase an encounter with it, and try on the power to transcend terrestrial space. These arrivals and departures, however, could only produce a recursive loop, an exodus folding back into the organizational systems that generated it. Video arcades challenged the logic of shopper circulation by offering chances to stand at a terminal, a dead end, to play games overwhelmingly ending in the player's defeat. Gamers were forever arriving and departing at odd intervals. A respectable consumer space, like a shopping mall or a grocery store, could take on the properties of a bus stop, with many attendant connotations of vagrancy intact.

The outwardly concerning appearance of players in commercial space is exacerbated by the narrow field of visual access through which a user can look down into game space. Friedrich Kittler has argued that the “peep show character” of single-viewer screens prevents many media formats from achieving public acceptance.[17] Derek Burrill calls the one-at-a-time viewpoint that exists between a user and an arcade screen an “isovist”, and argues that the viewpoints of closely-huddled players are capable of “overlapping and excluding each other” in a way that can “frustrate social arrangements.”[18] Players don't circulate freely, evaluating a bounty of products the way they might while shopping for other products. Instead, they compete for access to a desired isovist near the point of control. Arcade gamers compete to remain in simulated exodus from their disempowered physical and social positions. There is a perpetual disjuncture between users and the spaces they inhabit.

A mass of gamers provides unwanted feedback concerning their dispossession in the form of loitering bodies in commercial space. And unlike pool halls and bars, most American cities were unable to implement effective laws controlling the age of arcade patrons[19] .To make matters worse,

consumer feedback from arcade machines was predominantly the property of arcade operators and game developers, with questionable relationships to legitimate banking and business practices. The rise of home gaming is directly related to the form's ability to mitigate these concerns. Home gaming and computing devices transform games into commodities that can be purchased and taken home rather than dealt in small increments. Home gamers can appear within stores as everyday shoppers, instead of competitors at the interstices of commercial space. Unlike arcade environments, home gaming can be readily circumscribed within a space monitored by family members and cohabitants.

Returning to the Benjaminian perspective hinted at earlier, the video arcade can now be examined in terms of its transitional character. If an object's historical significance is revealed primarily during its decline, what more can the decline of video arcade gaming tell us about consumer culture in postwar America? Noting that arcades were considered undesirable because they challenged the spatial logic of commercial space, it begins to seem that a critical mass of disaffected gamers is precisely the type of anomaly that our system is oriented toward managing. Today, video arcade gaming can be reinterpreted as an intervention against the isolation and surveillance of domestic and networked gameplay, as well as a demonstration against the spatial conventions of consumer culture.

If we read the recent rise of networked and mobile gaming as the continued integration of domestic, commercial, and state control systems, then the death of arcade gaming may be a prescient case study in the oncoming death of other commercial spaces as well. Thus shopping centers and malls may one day also serve as strange artifacts from a different bygone era, championed retroactively by idealists who insist on the value of public appearance and physical proximity. In an era defined by networked interaction and surveillance, the visible, physical occupation of space is an inherently political action. Disruption of smooth circulation by commodities and shoppers may be precisely the form of feedback needed to argue in favor of a more flexible system.

Notes

[1] David M. Ewalt, "The Last Night at Chinatown Fair," *Forbes.com*, (accessed May 2011).

[2] Ryan Pierson, "Making Sense of Early Video Arcades: The Case of Pittsburgh, 1980-1983," *Canadian Journal of Film Studies* 20 (2011): 2.

[3] Anne Friedberg, *Window Shopping: Cinema and the Postmodern* (Berkeley: University of California, 1993), 75.

[4] Ibid.

[5] Steven Levy, Hackers: Heroes of the Computer Revolution (Garden City, NY: Anchor/Doubleday, 1984), 52. www.rle.mit.edu.

[6] Ibid., 351.

[7] Ibid., 59.

[8] Janet Abbate, *Inventing the Internet* (Cambridge, MA: MIT Press, 2000), 43-50.

[9] Allan Alcorn, "First-Hand: My Development as an Engineer in the Days Before Atari," IEEE History Center, ieeeghn.org/wiki/index.php/First-Hand:My_Development_as_an_Engineer_in_the_Years_Before_Atari (accessed March 2014).

[10] Ibid.

[11] Paul N Edwards, *The Closed World: Computers and the Politics of Discourse in Cold War America* (Cambridge, MA: MIT Press, 1996), 13-4.

[12] Norbert Weiner, *The Human Use of Human Beings: Cybernetics and Society* (Boston: Houghton Mifflin, 1950), 51.

[13] Antoine Bousquet, "Cyberneticizing the American war machine: Science and Computers in the Cold War." *Cold War History* 8 (1) (02)(2008): 7.102; Rheinhold Martin, *The Organizational Complex*. (Cambridge, Massachusetts: MIT Press, 2003) 28-37.

[14] Friedberg, *Window Shopping,* 122.

[15] Allan Alcorn, *Development of Pong*.

[16] Pierson, *Early Video Arcades*, 204.

[17] Friedrich Kittler, *Optical Media* (Malden, MA: Polity Press, 2010), 223.

[18] Derek A. Burrill, *Die Tryin: Videogames, Masculinity, Culture* (New York: Peter Lang, 2008), 64.

[19] Ryan Pierson, "Making Sense of Early Video Arcades: The Case of Pittsburgh, 1980-1983," *Canadian Journal of Film Studies* 20 (2011).

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