A "Total Play and Learning Experience": The Magnavox Odyssey's 1972 Dream of Media Convergence

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The first video and computer games were technology demonstrations, produced as proofs of concept or as public introductions to complex computational systems. As such, their material affordances and constructed imaginaries were roughly coincident. The Nimrod Digital Computer, built as a one-off in 1951, played the ancient counting game of Nim as a public demonstration of computation as gameplay. The same was the case for a number of one-off computer games written and exhibited as demonstrations in the 1950s and 1960s. Willy Higinbotham's Tennis For Two was designed to entertain visitors to Brookhaven National Laboratory in 1958 and 1959, and considered by Higinbotham to have been only a "minor accomplishment" (Higinbotham 6). Steve Russell and his collaborators wrote Spacewar on one of MIT's PDP-1 computers as a similar amusement for private use.

While Nolan Bushnell attempted to commercialize Spacewar when he adapted it to an arcade cabinet called Computer Space in 1971, his aim was merely to divert quarters otherwise destined for other entertainments in bars. Even Ralph Baer, when he began to experiment in 1966 with early prototypes of what would become the Odyssey, considered it a simple amusement. Within three years, however, Baer's project had become an expansive dream of media convergence, a social imaginary orbiting around a technological core whose material capacities it vastly outstripped. When it was released as the first video game console in 1972, the Magnavox Odyssey was already something else: an imagined model of a fully mediated life and home. This was the first and last gaming system—at least for decades—that dreamed of total mediation.

Two Divergent Game Spaces

During this time period, the dominant gaming platform was the tabletop. As Nathan Altice has argued, playing cards are platforms in the sense that they act as the "material substrate of games" (Altice 35). That is, they possess invariant affordances and constraints that structure all games developed for them. The same is true of board games, which, similar to card and dice games, utilize both the top-down (overhead) viewpoint afforded by the tabletop (usually for the graphical representation of a gamespace via a board, as well as played and available cards) and the face-to-face interaction afforded by opposing chair positions around the table. Board game popularity in particular had soared in the 1950s, benefiting from

post-war manufacturing economies of scale, increased middle class prosperity, and the effectiveness of television advertising. While the first computer and video games were appearing as demonstrations of powerful computational hardware, Monopoly, Scrabble, and newcomers Cluedo/Clue and Risk were selling millions of copies each year, played en mass in Anglophone countries—and making steady inroads against traditional tabletop games elsewhere.

By the late 1960s and early 1970s, tabletop gaming had become a space of increasing technical and social experimentation. Card games such as Chit Chat (1963) and Body Talk (1970) explored various modalities of interpersonal communication, providing conversation prompts in the former case, and non-verbal emotional cues in the latter. Many board games placed players into different subject positions as explorations of privilege and social justice, such as Blacks & Whites (1970) about structural racism, and The Cities Game (1970) about urban politics and faction-building. Tabletop game designers were also experimenting with new media interfaces such as optical devices (Sonar Sub Hunt, 1961) and electronic circuits (Radar Search, 1969). Voice of the Mummy, released by Milton Bradley in 1971, concealed a miniature record player with random track selection into its three-dimensional board, enabling the titular mummy itself to talk to the players, issuing them commands or pronouncing curses that directly affected gameplay. These sorts of social and multimedia experiments extended the space of the board game beyond the tabletop itself, incorporating the dynamics of the parlor or living room such as screen viewing, radio listening, and group socializing. These games formed part of a larger medial network of play anchored in domestic space.

When Ralph Baer hit upon the idea of harnessing the home television as a medium in which to play games, video games gained the potential to enter that same domestic space, a milieu radically at odds with the settings of technology demos and bar novelties. However, the conduit for this infiltration was the established informatic and entertainment platform of television. Baer's patent disclosure document from 1966 begins by describing the intent of his "TV Game" prototype: "The purpose of the invention is to provide a large variety of low-cost data entry devices which can be used by an operator to communicate with a monochrome or color TV set of standard, commercial unmodified type" (Baer, "Disclosure" 25). The common television, which ordinarily provides only unidirectional information to a passive viewer, will enter into two-way communication with an "operator," now figured as an active provider of data. This amounted, for Baer, to a medial polarity reversal: the player would produce the signals on the television, rather than receiving them from an external source. As Baer put it much later, "there was nothing trivial about inventing a way for ordinary people to interact with their TV sets" (Baer, Videogames, 14).[1]

After seven prototype game units developed with Bill Harrison and Bill Rusch at Sanders Associates (a U.S. defense contractor), Baer conceived of a variation he called the "All Purpose Box." The APB would be able to play games on a TV set, but it would also support interactive video quizzes for educational purposes. Perhaps most ambitiously, the APB was to include an acoustic modem that the user could set a telephone receiver on, and which could play back certain tones recorded from television commercials to a listening computer on the other end of the line in order to enable "impulse buying" (Participatory CATV). In 1969, Baer recorded a half-hour "demonstration" of the APB, discussing all of these proposed elements at length. Only the light gun driven quiz system and ping-pong video game elements were actually functionally demonstrated in the video. However, Baer asserted that "we would like to enable the public to buy the things they want to buy on impulse in a more facile manner" and demonstrated at length what such a transaction would entail, even going so far as to mimic a commercial (for an electric toothbrush) designed for the hypothetical system (Participatory CATV). In 1969, then, Baer was already imagining a fully interactive media system that would transform the TV into a two-way device in which broadcast information, human players, and distant computers would all exchange information.

Despite this expansive (if impractical) vision of multi-directional information flow and the activation of the viewer as a gaming consumer, Baer seems to have shown little interest in the world of analog tabletop gaming. The games that he and his engineering team developed in the late 1960s while working for Sanders utilized a number of

physical controllers (knobs, joysticks, a light gun, hand pumps, a quiz pen, and a golf club-and-ball set) and analog television overlays, but never board or card game elements[2]. The medial vectors stabilized by the lines of sight between players and game were entirely restricted to the horizontal dimension, mimicking the spatial relationship between television viewers and their TV sets. Thus while Baer imagined that his All Purpose Box would effect a radical polarity reversal of information flow in relation to passive television viewing, the system he engineered was entirely dependent upon the same topology of directed attention. The multi-vectored world of tabletop gaming and the horizontal axis of screen entertainment remained entirely non-coincident.

Magnavox and Hybrid Game Topology

Ralph Baer had a difficult time finding a company that would commercially release his All Purpose Box. In January 1969 his development team demonstrated their prototype console (which could only play games and administer quizzes) to representatives from every major U.S. television manufacturer: RCA, Zenith, Sylvania, GE, Motorola, and Magnavox. None of them believed that there could be a market for a device that allowed people to play games on their home TV. Bill Enders, a marketing executive at RCA, however, happened to be hired away by Magnavox in 1970 and, as part of a pitch to his new bosses, convinced them to reconsider Baer's device (now nicknamed "the Brown Box" for its vinyl woodgrain veneer) as a potential product. This lead to a new demonstration, and after another year of licensing negotiations, Magnavox decided to develop it as a commercial product. Robert Fritsche was assigned to helm the project as Product Manager, with George Kent as lead engineer and Ralph Baer as a consultant. Under this new development team, the the components of the APB that would require active television content—the quizzes and impulse buying functions—were never on the table, but the device's medial ambitions under the conceptual rubric of gaming were radically expanded.

Directed by Fritsche, the Magnavox team scrapped a number of the games developed by Baer's team at Sanders Associates, including screen games emulating Checkers-style board games and a golf putting game that utilized a physical golf ball controller and putting iron. They developed a number of new game ideas, however, and hired a Chicago design firm, Bradford/Cout, to design them. While this new spate of games used fewer console peripherals and somewhat simpler circuitry (they removed the capacity of the system to electronically produce color, for example), they made use of far more elaborate television overlays and, most importantly, new mechanics and components. These latter were borrowed from the world of tabletop gaming: custom card decks, poker chips, dice, scoring markers, paper money, and full gameboards. After five years of development as screen media under the direction of an electrical engineer, the Odyssey had suddenly made the leap into the multi-vectored world of the tabletop. George Kent gave the console a 15 foot long video cable, which, along with the console's battery-powered design, effectively rendered it a mobile device: a non-intuitive leap, given that entertainment consoles such as televisions, radios, and record players—Magnavox's chief products—were generally heavy, wood encased, immobile pieces of furniture permanently ensconced in their positions in the living room. The Odyssey console was now free to move about the room, enabling it to roam far from the television, to the coffee table. The coffee table served infrastructurally as the chief support of the Odyssey in a physical and social sense. Here a family could convene, simultaneously in front of a screen (as with television media) and around a table (as with the dominant gaming media).

Significantly, the Odyssey did not counterpose a digital system to the older analog modality of the tabletop game. Rather, the Odyssey was itself constructed of analog circuitry and controls, appropriating both the television as a display system and the tabletop as a platform for analog play. Elaborate, high-resolution overlays were affixed to the television screen (via the static electricity produced by the television's Cathode Ray Tube, though the system shipped with a roll of Scotch tape, just in case) and were designed to both reflect ambient light off of a visually rendered playfield and to refract light through translucent elements that, when backlit by generated spots on the TV screen, would glow various colors and/or shapes. These optical effects complimented the overhead perspective of analog gameboards or decks of cards that were arrayed on the table next to the console (Figure 1). The Odyssey, then, was an extremely ambitious hybrid game system

designed to unite the electronic resources afforded by television infrastructure, the interactive potentials of the computer, and the cardboard modalities and face-to-face social interactions of tabletop games.

Figure 1: The Odyssey game Invasion, simultaneously at home on the tabletop and on the screen.

Media Convergence

By the time of its release in 1972, the Odyssey was poised to merge three different entertainment media forms into an entirely new, hybrid modality. But the Magnavox team had greater aspirations still. The Odyssey would serve not only as entertainment media, but, taking a cue from Baer's original All Purpose Box concent, as educational media as well. The educational applications developed by Baer's team at Sanders—a color guessing game and the interactive quiz system—had relied on purpose-built hardware to implement. In contrast, Fritsche's team, along with Bradford/Cout, developed a slate of educational games that made use of tabletop mechanics. This was the team's refrain: instead of utilizing custom hardware, the system would take up the affordances of tabletop gaming in order to produce a "software" suite that would bridge media. For example, States was a geography and trivia game that featured an overlay depicting a map of the United States, including stickers that children could use to complete the Great Lakes, rendering even the overlay interactive to a limited extent.

The game included a set of 50 cards, each of which depicted the geographic location of a state on one side and the state's name and several trivia questions on the other. Players take turns launching a spot across the screen in a random direction, which would drift until it landed on one or more states for opportunities to collect the corresponding cards. Children were meant to compete with one another to collect the most cards, challenging each other with trivia contests to "steal" from one another. The game included a full paper map of the United States that the machine's pupils were meant to study when not playing the game.

Another game, Analogic, required on-the-fly calculation to determine the potential moves of each player's spaceship, while also attempting to direct a ball into her opponent's ship—a game that induces great anxiety in even collage age students today! (Figure 2). Another elaborate card game, Percepts, honed memory and pattern-matching skills, while Simon Says utilized cards and screen graphics to teach anatomy and reflexes to very young children, and an optional add-on game, Fun Zoo, taught children to identify different animals. More sophisticated games taught astronomy (University of the Solar System) and complex pattern recognition (W.I.N.). Reflecting the heavy educational emphasis of the system, Magnavox's original name for the product was "Skill-O-Vision." After lukewarm responses to the name at two consumer testing events in July and October of 1971, however, the team changed the name to "Odyssey."

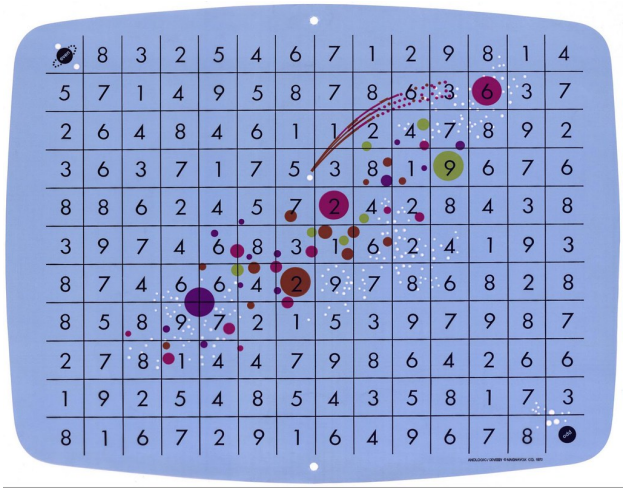

Figure 2: Overlay for Analogic.

Even Odyssey games that weren't explicitly educational invoked a wide-ranging set of skills, from gambling (Roulette), to strategy (Invasion), to rifle handling and marksmanship (Shooting Gallery)[3], to complex hand-eye coordination. While the latter is common to most video games, the Odyssey pushed this to the extreme. For example, Volleyball required each player to control three knobs nearly simultaneously, a physical impossibility for bimanual Homo sapiens[4]. Another game, Football, is a simulation so complex that it requires six full-size, diagram-laden pages in the Odyssey's instruction manual to explain how to play, not to mention a gameboard with cardboard tokens, five different decks of cards, a cardboard scoring wheel, dice, and a complex matrix to determine the effects on passing plays of current wind speed, and the use of two different game cards that must be swapped out of the console periodically during gameplay. This remains the video game with the steepest learning curve, from the entire history of the medium, I have ever played.

Test audiences in California and Michigan were asked by Magnavox via a post-use survey what they liked or disliked about the system, leading 20% of participants to spontaneously answer that the system was educational (Wiles 2). Other common responses were that they liked the group gaming aspect of the system, found it unique, and believed that it would develop skills, including dexterity. These results emboldened Fritsche, who concluded that the console would have "very high customer acceptance" and "broad customer appeal" (Fritsche, "Skill-O-Vision" 1). In Magnavox's ensuing print and television advertising campaign for the console, as well as on the product box itself, they marketed it as a "total play and learning experience" (Figure 3).

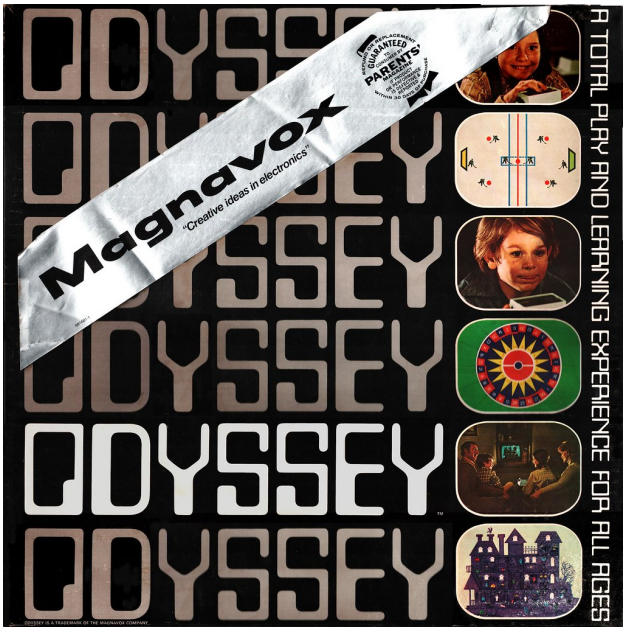

Figure 3: Magnavox Odyssey product box.

In a press release from 1972, distributed just prior to the release of the Odyssey, the company enthused: "Now for the first time, TV viewers can interact with their sets and relate to them in a positive active way, not just as passive viewers" (Magnavox Press Release). Indeed, the Odyssey players in Magnavox's television advertisements are always shown twisting knobs or shooting the light rifle, usually in tight closeups that cause them to visually dominate the reverse shots of the television screen. The message is clear: the screen, once passive, has become an active surface, a site of production and play similar to the tabletop.

In twenty-first century business parlance, "convergence" refers to a sundry series of business practices within the telecommunications industry that became increasingly prominent from the mid-1990s onward. Sylvia Chan-Olmsted, writing in 1998, identified three major forms of telecommunications convergence: "the integration of content such as video, audio, and data or information and entertainment... the integration of distribution systems such as telephone, cable, broadcast, and other wireless systems... [and] strategic integration between firms in the telephone, cable, broadcasting, and computer industries" (Chan-Olmsted 34). Later scholars such as Asle Rolland have expanded this list to include market convergence, network convergence ("the integration of all electronic services in the same transmission network"), terminal convergence ("the

integration of user terminals like the PC, the TV set and the telephone"), and value creation convergence (Rolland 13). The scholarly literature on media convergence, and the concept's popularity in the business world, was inaugurated by the mass adoption of the Internet and industry deregulation that began in 1996. Indeed, the Economist declared as late as 2006 that "'Convergence' is the telecoms industry's new mantra" (Economist, "Your Television is Ringing" 1, emphasis added). The conditions did not exist in the late 1960s and early 1970s for convergence in this full sense to occur, and yet the Magnavox Odyssey was clearly conceived and marketed in the spirit of content and terminal convergence.

The Odyssey did not make use of television's transmission network in 1972, which would be required for full network or transmission convergence, but in 1968 Sanders Associates had attempted to partner with the U.S.'s largest cable television provider, TelePrompter Corporation, to transmit game graphics through cable that would be processed by the console. However, TelePrompter ran into financial trouble later that year, "thus aborting the first attempt in the history of civilization to play interactive games over the cable" (Baer, Videogames 49). In 1974, however, Baer, working on behalf of Magnavox, brokered a deal with Warner Cable to create an interactive version of the Odyssey that cable subscribers could play over the cable network. Sanders Associates built a special cable box that would superimpose Odyssey player spots and quiz response spots over specially prepared transmissions featuring live game backgrounds, announcers, music, and quiz questions. At the reception end, they modified an Odyssey console to process the information encoded in the cable signal, allowing extra players generated in the studio to interact with the ball on local Odyssey consoles and mix the elements generated by the local Odyssey together with the signal from Warner, outputting the integrated sound and picture to the end user's television. Magnavox, Sanders Associates, and Warner Cable worked together to conduct a trial of this system in the Everitt, Massachusetts market in early 1974 (Baer, Videogames 107). It was a technical success, but despite nominal support from all three companies, it was never rolled out on a larger scale.

Nonetheless, both before and after this network convergence trial, Magnavox's advertising discursively short-circuited the television transmission network, suggesting that future TV content would be primarily created by end users, and that the future had arrived early in the form of the Odyssey. A promotional film sent to authorized Magnavox dealers to play for customers solemnly announced the arrival of "Odyssey, the electronic game of the future that let's you do your own thing on television" (Magnavox Promotional Film). The phrase "on television," by omitting the definite article "the" or the potential pronoun "your" with respect to the "television" serves to denote not the particular television set to which the viewer would attach their Odyssey console, but the media ecology of television in general. In other words, television was evoked not as a mere peripheral (a screen), but rather as a distribution network that could be entered or short-circuited in a participatory mode. In this regard the Odyssey, at least rhetorically, was a form of what Rita Raley calls "tactical media," or "the intervention and disruption of a dominant semiotic regime, the temporary creation of a situation in which signs, messages, and narratives are set into play and critical thinking becomes possible" (Raley 6). While the Odyssey was a consumer product and not an artist-activist project such as those highlighted by Raley, its discursive intervention vis-a-vis dominant media ecologies pushes it—at least in retrospect, given its subsequent historical unfolding—from the regulating and hegemonic level of the strategic to the temporary and interventionist disruptions of the tactical. It may not directly promote critical thinking, but it does free the subject form passive encoding via TV semiotics, opening up a space of active response, however circumscribed by the limitations of the system.

Magnavox's television commercials were even more expansive in their claims, both explicit and implicit. The Odyssey's first television spot opens in a deep space starfield, complete with an eerie, electronic science fiction musical track, before the Odyssey logo appears superimposed over distant stars. After demonstrating some of the console's games, the narrator intones, "Odyssey is an electronic teacher. Odyssey is a total play and learning experience for all ages" (Magnavox Odyssey Television Commercial #1). Another variant of the commercial turned this science fiction trope into a succinct claim of media convergence: "Odyssey, a new dimension for your television"

(Magnavox Odyssey Television Commercial #2).

The science fiction theme of its television advertising, the "computer" font that comprised its official logo[5], and the console's release name, "Odyssey," all reflected its lofty medial ambitions. The product name and space aesthetics were direct references to Stanley Kubrick's 2001: A Space Odyssey (whose design aesthetic too was copied in the console's striking housing), a film that had introduced the most famous sentient computer in cinema, HAL 9000. In both Arthur C. Clarke's novel and Kubrick's film, HAL serves as an omniscient mission planner with absolute authority over all aspects of the ship, mission protocols, and its human companions. Magnavox's deployment of the name "Odyssey" for a family-friendly interactive media platform evoked HAL's omniscience and total systemic domination at the same time that it put the humans back in charge. The conceit is clear: the Magnavox Odyssey is a fun version of HAL, not as a sentient entity, but as a total media platform that organizes its environment, trains and tests its human pupils, and interfaces them with expansive adventures in any and every milieu, from a medieval fantasy kingdom to the baseball diamond to the inner structures of the mind to narrative outer space missions (Interplanetary Voyage). In the Odyssey, the virtual space of invented game worlds will be layered over the abstract world of knowledge and the concrete world of the living room. At the coincidence of these three forms of space lies the ultimate media device, capable of enabling access and flow between them.

This form of convergence is more radical than the fusing of transmission media into multi-modal platforms, or the concomitant merging of economic sectors or businesses. It is a convergence of completely different sites of access (educational space, the domestic space of the home, the virtual space of narrative) and modalities of interaction (learning, familial dynamics, imaginative exploration). The convergence, or more properly coincidence, of these modalities is authorized by the game form. "A total play and learning experience." The process of play, in this medial formulation, is no longer confined to a single platform—tabletop, social gathering, or television screen. As media theorist Henry Jenkins notes, "Media convergence is more than simply a technological shift. Convergence alters the relationship between existing technologies, industries, markets, genres, and audiences" (Jenkins 15). The Odyssey attempts exactly this multimodal technical, social, and conceptual shift. Like the spaceship in 2001, there is no outside to the mediating system it imagines, only infinite insides. But unlike HAL, the Odyssey never locks you out. And presumably it won't try to kill you.

The Odyssey does, however, ask you to conform. It orders space: the living room as network topology. The coffee table will become the central node. A sofa and chairs must surround it. The television forms a separate node, held at a distance from the players, while short controller cables tether the humans near the console. Human players socially interact in a cluster mediated by the pole of the console itself[6], while also directing their attention to the opposite pole, the television, whose overlay and RF cable integrate it into the overall network of media effects even while maintaining its polar autonomy and center of gravity (Figure 4). This topological structure is at once spatial in its physical arrangement, social in its structured lines of communication and information, and informatic in its transmission channels for various forms of data. In short, this topology describes a cybernetic system that maintains the Odyssey's network centrality at the same time that the Odyssey facilitates a "total play and learning experience."

Figure 4: Detail from Magnavox Odyssey Brochure, 1972.

As social facilitator, creative stimulant, and informatic instructor, the Odyssey is a code switching interface and a universal equivalent,

opening up passage points between radically disparate registers of information at the same time that it effectively obsoletes the media that it has subsumed: television, tabletop play, the institution of public education, and the idle amusements of the parlor or living room. In both its demands and its promises, the console set an extremely high bar. A bar that it could not possibly hope to reach.

Unmet Promises

The Odyssey was marketed as a total media system that would substitute for and improve upon home tabletop gaming and passive television consumption, re-organize and re-vitalize the nuclear family by changing the dynamic of the living room, actively mediate the parental, sibling, and gender relationships of the family, and augment the educational system to promote and expand learning outside of the professional education environment. In short, it was conceived of, and marketed as, not a game platform but a complete media milieu. In 1972, the necessary infrastructure didn't exist to make good on these promises. While cable TV had much higher bandwidth than broadcast TV, and was thus technically capable of transmitting complex and multimodal streams of information, as the Warner Cable Odyssey pilot program demonstrated, cable was nowhere near mass adoption, and thus its networks were still quite thin. The Odyssey was not capable of storing, retrieving, or transmitting digital information, and thus couldn't act as a truly general information processing system even if robust electronic distribution networks had been available. Even Baer's All Purpose Box, if it had been technically practical, would have been only a storage and transmission node between digital television transmission and computational encoding at other points in the network.

Limited input and output options prevented the Odyssey from realizing its dreams of subsuming all other forms of home play and entertainment. Without a central processing unit, it couldn't process complex data or execute code, which would have made it a far more versatile machine, a necessity if it were to converge with or replace existing media ecologies. It thus never had the capacity to function as the total media environment it claimed to be.

The system, while not a market failure, was not a dramatic success either. Magnavox sold it as they did their high-end television sets: exclusively through authorized Magnavox dealers. This is a paradigmatically non-converged way of doing business, even for the 1970s! The Odyssey never had a chance to reach enough customers to establish a significant consumer base. Its $100 price tag was also a significant barrier, ensuring that most households in most countries couldn't afford it. This high price, equivalent to over $600 in today's currency, was the direct result of its ambitions: it did too many things, requiring too many components from too many disparate suppliers to manufacture cheaply. For an inaugural, category-defining product, and like its namesake Odysseus, it voyaged too far from home.

Despite initial customer demand, excitement, and satisfaction[7], the Odyssey wasn't accorded sustained or expanded play. Why? The prevailing assumption by gaming historians looking backwards from the viewpoint of the present has been that it was too primitive, and was soon overtaken by more advanced technology. This is only partially true. While technically limited in some ways (the ability to produce electronic graphical variety or perform complex calculations), the Odyssey actually failed with consumers not because it was too primitive, but because it was too complex. Every game other than Table Tennis required careful study of the instruction booklet. Many required the collation of numerous components, from erasable tablets (W.I.N.) to miniature plastic cars (Wipeout). The room lighting and television display settings had to be balanced correctly (especially for light rifle games and games with complex optical effects such as Haunted House and Ski). Some games required lengthly setup procedures (Invasion and Baseball; the latter required that statistics be generated via dice for every member of each player's lineup).

Unlike digital systems that rigidly enforce each game's rules in what Alexander Galloway calls "machine acts," which take both diagetic and nondiagetic forms (Galloway 5), an analog system like the Odyssey requires players to have a firm grasp of what's allowed and what isn't, and to diligently (self-) police those boundaries. All of these procedures greatly increase the cognitive load of players, before play even begins. Gameplay itself is also quite complex, as detailed throughout this essay. As my students can attest, today's video

game players find the Odyssey's intricate convergence of tabletop and electronic gaming modalities to be far more complex to learn and play than the average twenty-first century video game. Tabletop gamers of today are of course more familiar and comfortable with relatively steep learning curves and increased cognitive loads, but this was not necessarily true of the average gamer in the early 1970s. Even the more innovative tabletop games of the early 1970s emphasized complex social behavior over complex mechanics. The exception was the wargaming hobby, but the complex stats and deep strategic thinking necessitated by that genre of tabletop game didn't translate well to Odyssey play, where the unique challenge for gamers was to combine in one system and session two radically different modes of play. Few board games require complex hand-eye-screen coordination, while few video games require anything like the cognitive load and rule-based knowledge of the Odyssey's more advanced games.

Only around 350,000 Odyssey consoles were sold to the public, and Magnavox quickly lost interest. An enormous, successful corporation with billions of dollars in annual sales from its other divisions, Magnavox was perhaps too large of a player for such a radically new technology, with, paradoxically, too limited a distribution network. Magnavox released four new games for the Odyssey in 1973, designed by Don Emry, their first full-time game designer (Emry). These are among the strongest games released on the platform, including the solar-system hopping science fiction epic Interplanetary Voyage, the complex board-and-screen game Brain Wave, and the aforementioned W.I.N., which involved symbolic representation in multiple registers (numbers, images, and letters) and depicted a computer even if it couldn't employ one. These games admirably fueled the Odyssey's imaginary of media convergence and scalar expansion far beyond its technical means. However, by this time a harsh reconciliation was underway to correct the radical mismatch between the system's empirical capabilities and its expansive imaginary. Despite expanding into European and South American markets in 1973, Magnavox stopped actively promoting both the console and its add-on games, shut down further game development, and scrapped plans for a more advanced version of the console. The Odyssey's virtual edifice had collapsed.Without a stream of new content, the expensive Odyssey relied almost entirely upon console sales to new customers, and Magnavox finally discontinued the system by the end of 1975.

Legacies

In May of 1972, at an early public demonstration of the Odyssey in Burlingame, California, Nolan Bushnell of Nutting Associates played the console for half an hour. The next month Bushnell hired young engineer, Al Alcorn, described the Odyssey game Table Tennis to him, and asked him to re-create an arcade cabinet version of it as his first assignment (Donovan 23). The result was Pong, which became the hit that made Atari profitable. Magnavox sued Atari for its intellectual property theft, and Atari quickly settled out of court, becoming a licensee of Magnavox rather than risk curtailing the meteoric rise of their derivative game.

Pong extracted a reductive set of potentials from the Odyssey: it copied one of the simplest of the Odyssey's many games, and the only one that didn't make use of physical components beyond the console itself. Pong stripped away not only the Odyssey's game library and constellation of components, but also its programmable game modes. Pong would have one and only one playable state. Instead of a 36 page rulebook, it offered only these instructions: "Deposit quarter / Ball will serve automatically / Avoid missing ball for high score." Bushnell, unlike Fritsche, had no interest in the complexities of tabletop gaming. Even within that single game itself, Pong removed the Odyssey's version's horizontal movement, serve function, and ball control. All that was left as a control interface was a single knob for each player, and a slot in which to feed quarters.

Pong returned video games to non-converged status as singular and contained sites of amusement. It made no pretense to be anything other than a novelty. Its simplicity was emulated by other companies, including Magnavox, which began producing stripped-down consoles in 1975 with the Odyssey 100, which could only play two of the original Odyssey's 28 games. Gone were the gameboards, dice, cards, and overlays. Video gaming had retreated to the TV screen and given up most of its complexity and most of its media convergence aspirations.

When microprocessors were developed that were sufficiently cheap and powerful to produce fully digital video game consoles, those digital affordances were utilized to simplify video games rather than complexify them. The Atari VCS (later renamed the 2600), the runaway success of the second console generation, was, like Pong, a paragon of asceticism, stripping away the Odyssey's multiple knobs, retaining only one button and a directional joystick as its primary controller. Compared to the Odyssey, the Atari ecosystem contained no game elements outside of the virtual space of the screen, other than its controllers. It even eliminated, in the case of most games, the second player. Where the Odyssey, and even Pong, were fundamentally two-player systems, the Atari VCS began a trend that has continued in video game culture to this day: solo play. Not only did Atari completely abandon the modality of tabletop play, then, but also made little attempt to harness its social dynamics in any other form. While Philips (which had become the parent company of Magnavox) did release a second-generation console, the Odyssey2, it sold relatively poorly in relation to the Atari VCS, prompting Philip's permanent exit from the video game industry in 1984 following the 1983 video game crash.

The great irony of the Odyssey is that while it catalyzed the entire video game industry, that industry developed in ways fundamentally at odds with the vision underlying the Odyssey. It was an apocryphal media system from the beginning, an expansive concept and set of potentials that were never fully realized. Its legacy was not to pull game culture toward its vision of a radically open space of social and technological interaction across tabletop, screen, and parlor modalities of play, but rather to push game culture away from convergence. Thus while the Odyssey succeeded in corporate terms by making Magnavox money, and in industry terms by directly inspiring the meteoric rise of video games in our technological ecosystem, it failed to instill its expansive imaginary in our media culture. The later coining of the term "video game" performed the trivializing and reductive work necessary to transmute this apocryphal chapter of media history into a comparatively banal, but economically lucrative, product category.

[1] While it is true that no consumer device had produced electronic signals on a home television for entertainment purposes before, television historian Lynn Spigel has argued that television as a media institution was far from a unidirectional medium of transmission, and television consumers were far from passive receivers. Post-war television culture was just as engaged with household producers, and "engaged women in a popular dialogue about television's relationship to family life" as part of an active social milieu (Spigel 5).

[2] Baer and his associate Bill Harrison did adapt the board games Chess and Checkers into several screen-based variations that could be played on their prototype devices. These versions were highly reductive, given the technical limitations of depicting only two playing "pieces" on the screen. The resulting games could not be said to emulate anything like their tabletop counterparts. The only variation that survived to the product stage was a math game that used a boardgame-like grid (Figure 2). The game was named Analogic by Magnavox, and upgraded with a real-time bouncing ball and physical poker chips that were collected and spent during play.

[3] The Odyssey's light rifle was extremely realistic in appearance and function, including adjustable sights and a pump action that reset the on-screen target square after it had been successfully "killed." The gun was also highly accurate.

[4] My students and I joke that the Odyssey was clearly created for some other, probably speculative, species.

[5] The font was identical to that used in the film Colossus: The Forbin Project, released just two years earlier, in 1970. Colossus features a sentient supercomputer that takes control of, among other media devices, television sets.

[6] Raiford Guins notes that in media history, the term "console" is associated with the function of supporting access to a system. "Its specific role (and meaning) is dependent on while enabled by the various technical objects and heterogeneous networks upon which it relies and

interfaces/instructs for gameplay" (Guins 70). My analysis here suggests a slightly more active or organizational role for the Odyssey, a console with loftier ambitions than nearly any other. It acts as a social, spatial, and informatic hub, a structural node that stabilizes a network around it. The Odyssey is not the signal generator, but the network.

[7] The console shipped with a customer registration card to collect feedback from users. The first tally, after three months on the market, indicated an 89% satisfaction rate (Frische, "Odyssey" 3).

REFERENCES

[1] Baer, Ralph H. Disclosure Document. 1 Sept. 1966.

[2] Baer, Ralph. Participatory CATV. 1969.

[3] ---. Videogames: In the Beginning. Rolenta Press, 2005.

[4] Chan-Olmsted, Sylvia M. "Mergers, Acquisitions, and Convergence: The Strategic Alliances of Broadcasting, Cable Television, and Telephone Services." Journal of Media Economics, vol. 11, no. 3, July 1998, pp. 33–46. Taylor and Francis+NEJM, doi:10.1207/s15327736me1103_4.

[5] Donovan, Tristan. Replay: The History of Video Games. Yellow Ant, 2010.

[6] Emry, Don. Odyssey - The Original. 8 Mar. 2004, https://forum.digitpress.com/forum/showthread.php?29826-Odyssey-The-Original.

[7] Fritsche, Robert. Odyssey. Magnavox internal memo, 28 Nov. 1972.

[8] ---. Skill-O-Vision. Magnavox internal memo, 15 Oct. 1971.

[9] Galloway, Alexander R. Gaming: Essays On Algorithmic Culture. First edition edition, Univ Of Minnesota Press, 2006.

[10] Guins, Raiford. "Console." Debugging Game History: A Critical Lexicon, edited by Henry Lowood and Raiford Guins, First Edition edition, The MIT Press, 2016, pp. 63–72.

[11] Higinbotham, William. The Brookhaven TV-Tennis Game.

[12] Jenkins, Henry. Convergence Culture: Where Old and New Media Collide. Revised edition, NYU Press, 2008.

[13] Kubrick, Stanley. 2001: A Space Odyssey. 1968.

[14] Magnavox Odyssey Brochure. Magnavox, 1972.

[15] Magnavox Odyssey TV Commerical #1. 1972.

[16] Magnavox Odyssey TV Commerical #2. 1973.

[17] Odyssey Press Release. Magnavox, 1972.

[18] Odyssey Promotional Film. Magnavox, 1972.

[19] Raley, Rita. Tactical Media. 1 edition, Univ Of Minnesota Press, 2009.

[20] Rolland, Asle. "Convergence as Strategy for Value Creation." International Journal on Media Management, vol. 5, no. 1, Jan. 2003, pp. 14–24. Taylor and Francis+NEJM, doi:10.1080/14241270309390015.

[21] Sargent, Joseph. Colossus: The Forbin Project. 1970.

[22] Spigel, Lynn. Make Room for TV: Television and the Family Ideal in Postwar America. University of Chicago Press, 2013.

[23] Wiles, Bob. Combined Survey Questions Summary. Magnavox internal memo, Oct. 1971.

[24] "Your Television Is Ringing." The Economist, Oct. 2006. The Economist, https://www.economist.com/special-report/2006/10/12/your-television-is-ringing.