Before the Crash

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What's Victoria Got To Do with It?

Toward an Archaeology of Domestic Video Gaming

Video games are played by persons, but they are also played by contexts, because we cannot separate ourselves from the cultural, ideological, economic, and social conditions within which we live our lives.[1] Humans mold contexts, but—perhaps to an even greater degree—contexts mold humans. A person pushing a shopping cart through the isles of a supermarket may feel absolutely free to choose whatever he or she wants, but the shopper's choices have been preconditioned by all kinds of determinants: peer group preferences (including those disseminated by Facebook and other social media), lifestyle issues, educational discourses, promotional strategies, and media feeds (including "product placement" in movies and electronic games). "Personal taste" and "freedom of choice" are largely illusions, at least if treated as absolutes.

In a similar way, wildly waving the Wii Remote in a living room sports session or clutching the Xbox 360 controller on a romp through the badlands of *Red Dead Redemption* (2010) may seem acts of spontaneous fun or liberatory forays into virtual never never lands where everything is possible. Although this may be true on the surface, there is always more beyond it. Like the shopper, the gamer can never fully escape the fact that gaming is rooted in discursive formations and shared codes that are cultural and historical. They inform the experience, whether the gamer is aware of it or not. A media-archaeological approach to gaming will clarify such issues by placing gaming within wider contexts.[2] My 2005 article "Slots of Fun, Slots of Trouble" attempted to do so, focusing on the archaeology of arcade gaming, from mechanical games to electronic games.[3] The present text should

be considered its companion, an extension into the sphere of privacy.

The topic can be divided into three interrelated issues, all of which require their own archaeologies. The first concerns the process through which the home turned into a "media center"; the second, interactivity; and the third, tinkering with media technology. The home's development into a media center was longer and more complex than is usually thought. It involves the formation of what Richard Chalfen calls the "home mode communication."[4] Domestic video gaming is one of many media-related rituals repeatedly enacted within the home. It is or has been related with practices such as viewing stereoscopic photographs (a Victorian craze), listening to recorded music or the radio, watching travel slides and home movies, consuming television, text messaging, and surfing the internet. These practices immediately raise a question about the relationship between media that stay within the domestic walls and those that breach them. Of course, the media that are used in the home don't always remain there; they are also transported to outdoor spaces. The borderline between domestic and mobile media is becoming more and more fluid.

Although gaming is related to other domestic media practices, it is not identical with any of them. One of the issues that separates it is interactivity—the fact that gamers initiate a temporally unfolding active exchange with the game machine and the experiences it provides. The emergence of interactivity has often been simply related with digital computers, but as I have demonstrated in earlier studies, it has a much longer history that goes back far before the era of digital technology.[5] The relationship between "interactive" and "passive" modes of media consumption is often not clearcut. For early forms of interactivity in the domestic setting, we must turn to "philosophical toys," board games, and other domestic pastimes.

Interactivity normally involves interactions with prefabricated applications via standardized interfaces. However, it is also closely related with activities in which the user adopts a more active role, turning into a tinkerer, hobbyist, and even a hacker. Such a transformation also points to the nineteenth century. Using instructions published in handbooks for boys and in children's magazines, countless Victorian children set out to create their own toy theatres, scrapbooks, and even optical motion toys. The widespread culture of radio amateurism and electrical tinkering was built in the early twentieth century on this foundation, influenced by new generations of hobbyist and popular-science publications and better availability of electrical components. Tinkering with technology has always been part of the world of domestic gaming, although the attitudes of the game industry and its publicity machineries are ambivalent toward it.

Beside material and technological developments, I will pay attention

to the ways in which users respond to media, redefine their uses, and contribute meanings that resonate within media culture at large. The public surface of game culture is produced by massive identity machineries operated by software and hardware manufacturers with the willing support of advertisers and popular media outlets. Gamers and enthusiasts add their share as well, circulating information, opinions, and rumors on countless online forums (including "independent" blog sites covertly funded by the media industry). A media archaeology of gaming penetrates beyond this uneven, reflective, and multipatterned surface, looking for symptoms of neglected and suppressed developments behind it. While illuminating the past, media-archaeological excavations also help us question the received truths of contemporary culture.

Back to the Future, or Pre-Positioning the Video Game Console

In 1978, Magnavox, the American television manufacturer that had reinvented itself as a pioneer of domestic video gaming, released Odyssey[2], another descendent of its legendary flagship product, the Odyssey (1972). A magazine advertisement promoting the Odyssey[2], shows a grinning father and smiling daughter staring intensely at each other, clutching joysticks between their fingers (Fig. 2.1).[6] Both are shown in profile, the console and TV-screen game display between them, facing the reader—we are obviously invited to place ourselves within the picture via identification. The projectile shot by the father's avatar is bouncing from a tree—*a miss!*—whereas the daughter's avatar is about to make a direct hit at the "father figure"—*bang!* The ad presents Odyssey[2] as a way of bonding—family members, sexes, and generations—but in a playfully subversive and mischievous way. Reversing prevailing social norms, the daughter may humiliate her father without being punished, as long as it happens within the virtual world of the game.
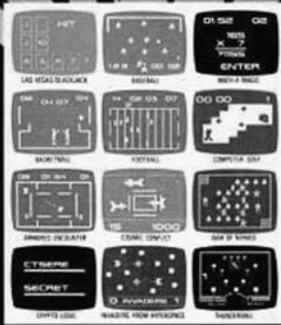
The text presents the console as the "ultimate gift" (probably from the father to the family). The slogan at the bottom sums up Magnavox's mission: "We make staying home fun." For the media archaeologist, this is not the whole story or even the full sentence. Its unstated cultural subtext could be formulated as follows: "so that children will never leave their parents, and will stay away from bars, game arcades, and other bad influences." Underlying the slogan is the implicit suggestion that without the system, staying at home is *not* fun. The "transgression" of social norms the ad hints at serves this purpose: the Odyssey[2], connected with the domestic television set, provides the daughter a harmless way of releasing whatever pressures

Fig. 2.2. Magnavox Odyssey[2] advertisement. From www.retroist.com/2009/04/15/magnavox-odyssey-2-ad-from-1980.

may emerge within the nuclear family. Beyond the facade of pure fun, the game console is actually a regulator for social-psychological interactions.

The ad we have just analyzed was a variant of a formula Magnavox had used for the original Odyssey; the father faced his son in a similar situation playing in a virtual tennis game (the Odyssey[2] campaign likely emulated the same poses to facilitate product recognition). However, a review of the iconography around early domestic video gaming (ads as well as packaging designs) shows that it was more common to display the entire family gathered around the console and television combination.[7] The situation was derived from all the iconography surrounding the television, which is understandable because early video game consoles were seen as additions to the familiar device. "Turn your TV into the most exciting home video game ever" the previously mentioned ad for the Odyssey[2] declared. Perhaps the television had become too familiar, losing some of its effectiveness as social cement. The game console electrified the situation, but, as we will see, it did more than that.

In its promoters' minds, the video game console—although touted as a novelty—was placed in a position that already existed. This position was not determined only by interior design or the marketing of new technology; it also concerned the formation and consolidation of social relationships within the domestic sphere. Books like Lynn Spigel's *Make Room for TV: Television and the Family Ideal in Postwar America* (1992) and Cecelia Tichi's *Electronic Hearth: Creating an American Television Culture* (1991) provide plenty of evidence about the ways television became rooted within the home and also within the awareness of the culture at large.[8] What these books don't discuss are the ways in which the roles and meanings of the television were instigated by earlier domestic media practices. A look at these longer trajectories will give us a better understanding of the positioning of video gaming within the home.

The Home and the Media: Early Connections

"Domestic media devices" first appeared in European homes in the eighteenth century as fashionable novelties for the privileged classes. Fascinating gadgets, like peepshow boxes and camera obscuras, as well as pictures that produced visual surprises such as anamorphic images, alleviated the ennui of the inhabitants and their guests, and at least nominally instructed and informed them. The origins of such objects point to "natural magic," an intellectual current prevalent among the Jesuits in the sixteenth and seventeenth centuries. For the Jesuits, the interplay between the astonishment created by optical tricks and the explanation of their causes was important.

It influenced the ideology of "philosophical toys," such as anamorphoses, kaleidoscopes, thaumatropes, and zoetropes, which were meant to amuse and instruct at the same time. Similar ways of thinking can be found from educational works written during the Enlightenment by authors like Abbé Nollet, Benjamin Martin, and William Hooper. The title of Hooper's *Rational Recreations* (1774) conveys much of their nature. Sir David Brewster's *Letters on Natural Magic* (1832) continued along similar lines, pointing the way to countless later manuals of "rational" pastimes.

A common way domestic users interfaced with media was peeping. We could speak about "peep media," or the history of domestic "peep practice."[9] The images were hidden inside dedicated boxes; to view them, one had to place one's eye into a hole which often had a magnifying lens.[10] Illumination was provided by candles or by opening and closing panels at the sides of the box, which could also be used to make the images "move." Peepshow boxes and other related devices such as zograscopes became a fashion among the eighteenth-century nobility, and a veritable industry emerged to produce perspective views (*vues d'optique*) for them.[11]

The emergence of the bourgeoisie transformed the public sphere.[12] The semipublic, social showroom-like nature of the mansions of the nobility was replaced by an emphasis on privacy in the homes of the bourgeoisie. Their salons were very different from those of the aristocracy, as they opened their doors only to the family and an intimate circle of friends and relatives. Houses were divided into private rooms for the inhabitants; the role of open reception areas was diminished. Such a setting inspired intimate domestic pastimes. There was a new emphasis on reading, both reading aloud and silently. New literary genres such as the novel became a fashion, and the ubiquitous habit of letter writing functioned both as a way of passing news and expressing one's intimate feelings. The growing popularity of magazines and newspapers created a textual connection between privacy and the world at large. The home became a lucrative market for companies that began to produce board games and other pastimes.[13]

This development reached its apogee in the Victorian era. The home became segregated from the outside world. It was defined as a haven, far from the noise, stress, hurry, pollution, and other dangers of the urban outdoors. This reflected developments taking place outside—the intensification of the processes of industrialization and capitalism, and the speeding up of urban life. The industrial proletariat was a new, threatening mass roaming the streets. The Victorian home turned into a microworld, full to the brim of furniture, fabrics, mementos, pictures, and objects of all kinds, all to combat a looming sense of horror vacui and to create a temporary illusion that there was no outside.

Rich arrays of domestic pastimes were developed, including games, handicrafts, and the habit of collecting.[14] Media imagery became more and more widely available, thanks to the invention of lithography and photography, as well as the wide distribution of illustrated magazines. Pictures were cut out and turned into collages in scrapbooks or on folding screens or room dividers (coated with varnish, these became a staple of the Victorian home). The scrapbook in particular was an important private medium for expressing oneself, making sense of the world, and communicating one's ideas to the intimate family circle.[15] The habit of using and even constructing optical devices fitted perfectly within such an environment.

The Stereoscope: The First True Domestic Media Device

Domestic peep media was given a strong impetus in the second half of the nineteenth century by novelties like the Megalethoscope and the stereoscope. The former was a large and elaborate piece of "optical furniture" for the parlors of the bourgeoisie (Fig. 2.2). It was patented by the Italian photographer Carlo Ponti in the 1860s and used for viewing large photographic albumen prints. The Megalethoscope was produced in various finishes, from relatively plain to extremely ornate, and it often stood on a cabinet containing dozens of views. Its operation principles were always the same: the user peeped into a large lens in one end of the device, pictures were placed in a slot in the other end, and the lighting was transformed by opening and closing panels on the sides of the box. The variety of surface designs expressed the owner's social status. *Any* version was beyond the reach of the lower strata of society. Lower-class homes did not even have enough space to house it.

When availability, popularity, and longevity are considered, the stereoscope was the first true domestic media machine.[16] Introduced for the public at the Crystal Palace exhibition in London in 1851, the production of both viewers and stereoscopic photographs soon reached huge volumes; a true mass-market opened. A great variety of models was designed, including elaborate decorated cabinet versions that housed dozens of stereoviews. In the late 1850s, a cheap and practical handheld model designed by the American medical doctor and writer Oliver Wendell Holmes was brought to market and known as the Holmes-Bates stereoscope. The stereoview was placed in an open holder, while the lenses were under a hood. By the late nineteenth century, such simple viewers were found practically everywhere. They were used both at homes and classrooms and given away by companies that used collectible stereocards to advertise their products.

Early stereoviews often depicted Victorian parlors (Fig.2.3). Family

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Fig. 2.2. Megalethoscope. From Erkki Huhtamo's Phantasmagoria Collection, Museum of the Moving Image, Helsinki, Finland.

and friends were shown engaged in leisure activities such as playing board games, singing, reading, and viewing stereocards themselves. Such views confirmed the importance of new optical instruments. As photographic technology became more easily portable, views of famous cities, landmarks, and distant lands became more prominent. The stereoscope developed into a veritable virtual-voyaging tool.[17] Toward the end of the century, "package tours," complete with carefully arranged stereocards, guidebooks, and maps, were sold in handsome boxes that looked like books.[18] Although the 3-D illusion of "really standing on the spot" provided by stereoscopic photographs was artificial, the stereoscope was hailed as a device that brought the outside world within the walls of the home.

With the proliferation of cheap stereoscopes and mass-produced stereocards, even lower income households were brought into realm of visual media. In spite (or because?) of the massive cultural presence of the stereoscope, few written testimonies about its uses and reception seem to exist. There is, however, a wealth of stereoviews and other photographs showing users peering into the device. Although these were often produced as marketing gimmicks, they provide us some clues about how their contemporaries saw the device and what kind of meanings they associated with it.
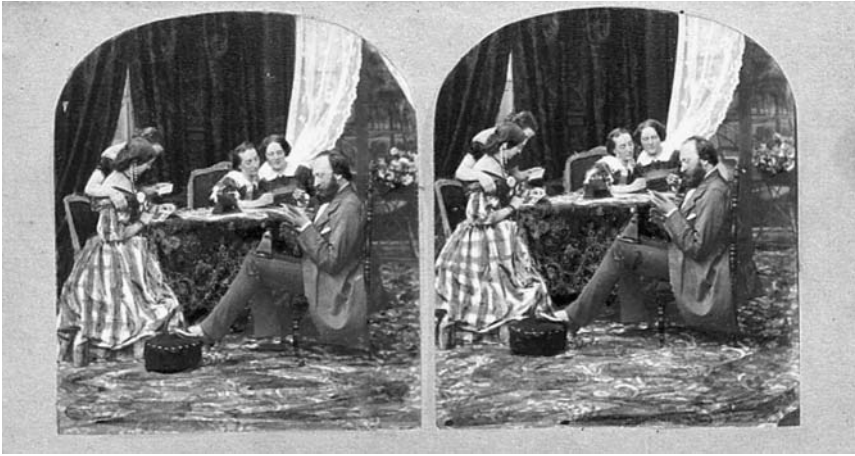
Fig. 2.3. Posed Victorian stereoview showing a group of people in a parlor spending time with stereoviews. Gaudin, Paris, circa 1860s. From the author's collection.

Photographs of interiors where the stereoscope has been accidentally (?) left on the table confirm its established presence in the Victorian home. Stereoscopes and stereoviews were also used as props at photographers' studios, and can be seen in many cabinet-card photographs, associating the sitters with optical technology.

Photographs depicting just a single person immersed in the stereoscope are uncommon compared with images of families or groups of friends spending time together with it. This may be surprising, because the stereoscope—like the peepshow box—seems to encourage solitary immersion. Still, it is common to see views of people sitting around a table, browsing piles of stereoscopic cards, and passing the stereoscope from hand to hand; or sitting in armchairs and sofas, viewing stereoviews. They may be at the same time engaged in other activities, too, such as knitting, reading, or playing chess, while the children are playing with toys. The latter are sometimes depicted peering into stereoscopes without any adults present, even demonstrating its secrets to the family dog.

The iconography identifies the stereoscope as a "conservationist" instrument that holds the nuclear family together and confirms the integrity of the home. In an illustration from a mail-order catalog, a mother is seen happily spending "An Evening at Home With the Little Ones"; stereoscopy is promoted as a good pastime that will keep the mother and the children together.[19] The Keystone View Company often ended its "world voyaging" sets with a view titled "Still There's No Place Like Home," showing the fam-

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ily sitting together in harmony in the domestic parlor, obviously having just completed its world tour. The potentially disruptive effects of traveling have been defeated, the patriotic family ideology reinstated. As one of the cards states, "At the foundation of all our glory, the best thing under our flag is the true American home."[20]

However, there were signs that pointed to potential ruptures in the apparent harmony of domestic ideology. A two-page cartoon published in *Harper's Monthly* in 1860 shows what happens when the father brings a stereoscope into the home (anticipating the countless future fathers with boxes of home electronics, from TV sets to game consoles).[21] The rituals of family life are disrupted. Not only are habits like reading abandoned, but the entire family—including the pets—become cross-eyed wrecks! The cartoon demonstrates that the public debates about the effects of media evoked in later contexts, from the television to video games to the Internet, are not without precedents.

The stereoscope's role within the Victorian family anticipated those of later domestic media. Although its apparatus was very different from the television set, it made its users accustomed with the idea of visiting different parts of the worlds, and also enjoying pictorial narratives, without leaving one's home. Although she does not refer to the stereoscope directly, television theorist Lynn Spigel correctly states that "television's inclusion in the home was subject to preexisting models of gender and generational hierarchies among family members—hierarchies that had been operative since the Victorian period."[22] This issue deserves a more detailed analysis than what can be attempted here.

A Tactile and Interactive Relationship with Domestic Media Develops

Spectators who attended public performances by touring magic lanternists, peepshowmen, or shadow-theater artists had to accommodate themselves to the role of more or less passive observers. Already by the eighteenth century, however, domestic users who gathered around a small peepshow box, zograscope, or miniaturized shadow theatre could playfully alternate between the roles of showman and audience. The possibility of manipulating a device for the purpose of self-expression was an early instance of the development that led to "personal media machines" such as game consoles, personal computers, and smartphones. It could be considered a manifestation of "touch practice" that has alternated with "screen practice" and "peep practice" for centuries.[23] Long after itinerant showmen had disappeared, "touch practice" flourished in nurseries, where children operated toy peep-

shows and tiny magic lanterns; these were eventually supplanted by other gadgets.

When the Massachusetts-based game and toy manufacturer Milton Bradley developed its first moving panorama toy, *The Myriopticon: A Historical Panorama of the Rebellion* (released in 1866), it imitated the forms of the professional moving panorama shows that were touring the United States. The company's history claims that Bradley drew the pictures himself, although many of them were based on iconographical models appropriated from illustrated magazines and other popular visual sources.[24] The Myriopticon was delivered in a beautifully designed cardboard box with a hand crank, lecture text, a handsome folded broadside (a kind of poster), and sheet of tiny entrance tickets to be cut out by the new owner. In spite of its minuscule size, the Myriopticon reportedly made it possible to reenact a public panorama show in private, if we are to believe a letter purportedly sent to the company by Mr. B. R. Davis from Vermont and published in its corporate history:

> DEAR SIRS: I have received the new Myriopticon [*sic*] Game [*sic*] and whilst I find it instructive and amusing I must say that it is making changes in our household that are something to think about. Every evening after Supper my wife and five children and I foregather in the parlor and the curtains are pulled and the lamp lit. They have elected me as head of the family to recite the lecture and turn the pictures, which I do every evening.[25]

Davis even claims that he had to perform for a growing number of neighbors as well, which effectively turned him into a domestic moving panorama showman. Davis seems to have followed Milton Bradley's instructions obediently as he "turned the pictures." Confirming the prevailing patriarchal ideology, it was the father who turned the crank and delivered the lecture, while the mother and the children were conceived as spectators.

For descriptions of how optical devices were used in nineteenth-century homes, we often rely on texts and illustrations published by the manufacturers themselves. These only give us an ideal(ized) version, without revealing how the users responded to the product. When it comes to optical toys such as the phenakistiscope, invented simultaneously by Joseph Plateau (in Brussels) and Simon Stampfer (in Vienna) in 1832, it seems that it was originally marketed for adults as a fashionable gift. Months after the invention had been made public in scientific circles, the first sets of phenakistiscope discs were put on the market, sold by fashionable boutiques as novelty items for the wealthy bourgeoisie. As decades passed, and edition

after edition was sold, the device lost its novelty value and the target audience changed to children.

Another "persistence of vision" device, the zoetrope ("Wheel of Life"), was invented around the same time as the phenakistiscope, but only turned into a product in the 1860s (Fig. 2.4) . In the United States it was promoted by the Milton Bradley company, which introduced it as "an original, ingenious, and very curious application of a well-known optical principle." To accompany the device, Milton Bradley released a booklet titled *The Philosophical Principles of the Zoetrope, or Wheel of Life* (c. 1867) that explained its principle and operation in detail, and quoted opinions from both newspapers and well-known scientists (to whom the company had very probably sent samples).[26] Reenacting the age-old tradition of natural magic, professor Joseph Lovering from Harvard College stated outright that he considered it "in every respect worthy of a place in my philosophical cabinet."

The main target was the family, although the voices quoted in the booklet could not agree whether the zoetrope was meant for both "old and young" or for the children. A lithographic illustration depicted a family with enthusiastic children around the attractive rotating picture drum. The *Hartford Courant* made an important observation, stating that "any number of persons can enjoy it at once." Whereas the handheld phenakistiscope, like the Holmes-Bates stereoscope, was meant for a single user at a time, the zoetrope accommodated a domestic audience. The illustration on

Fig. 2.4. Family around a Zoetrope. From the booklet *The Philosophical Principles of the Zoetrope, or Wheel of Life* (Springfield, MA: Milton Bradley, c. 1867). Public domain.

the cover of the sheet music partition for Emile Ettling's "The Wheel of Life Polka" (late 1860s) shows the zoetrope spinning by itself on a salon table, while fashionably dressed grown-ups stare intently at the novelty device.[27] Everyone has adopted the role of the spectator, keeping fingers off of the surface of the spinning drum.

There are other visual sources suggesting that people engaged in active tactile interaction with the device, placing new animation strips inside the drum, and trying out different effects by spinning it faster or slower, and in different directions. Milton Bradley's booklet instructed the users to try out different combinations of partly overlapping strips, claiming that this caused surprising transformations. In fact, this practice was an early method of "editing" moving pictures.[28] Although the booklet did not mention it (probably because the company wanted to sell its own "software," sets of zoetrope picture strips), it was not very difficult to learn to create one's own animation strips for the zoetrope; a practice that is still often used in visual education.

The zoetrope can be interpreted as a proto-interactive device, because it allows the user to manipulate it directly and modify its "software." It could perhaps even be called interactive, depending on our requirements for this term. What is essential is the continual and active relationship between the user and the device. Another important aspect is relative size: unlike public spectacles, such as professional moving panoramas or magic lantern projections, the zoetrope was small compared with the human body and was within the reach of the hands. In this sense, it could be compared with doll houses, toy theaters, and other artifacts that encouraged role-playing by projecting situations of everyday life into miniature environments and allowing children to invent their own scenarios.

The Boy Showman Entertains the Family

The active relationship between media machines and home users is a theme that appears often in the nineteenth-century handbooks for domestic pastimes published in the wake of Hooper's popular *Rational Recreations* (1774), an influential work that was reprinted numerous times. Borrowing many things from an earlier French book by Guyot, Hooper provided detailed and easy-to-understand instructions for constructing camera obscuras, magic lanterns, and other devices, as well as tips about experiments and tricks that could be performed with them.[29] For example, *The Boy's Own Book of Indoor Games and Recreations* contained detailed instructions for making peepshow boxes, which could be "about the size of an ordinary cigar-box, or large enough to cover a dining-room table."[30] The book

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encouraged the prospective children's room showman: "The following peep shows, if carefully and neatly made—and they are well within the capacity of any handy boy—will form permanent and most interesting recreations, to say nothing of the pleasure to be obtained in their construction."[31]

New gadgets were added to the standard repertory. Countless middle-class boys read such literature eagerly and moved from theory to praxis. One of them was the American John Banvard, who became famous as a moving panorama showman. Articles published about his life in the 1840s recounted an episode supposed to have taken place when Banvard was still a boy living in his family's home in New York. Banvard, so the story goes, created an entertainment for which he even printed little advertising broadsides. The episode would have sounded like a legend had not one of these crudely printed documents survived:

> Banvard's Amusements
>
> (To be seen at No 68 Centre street, between White and Walker.)
> Consisting of
> 1st. Solar Microscope
> 2nd. Camera Obscura
> 3d. Punch & Judy,
> 4th Sea Scene,
> 5th. Magic Lantern.
>
> Admittance (to see the whole) six cents.
> The following are the days of Performance viz.
> Mondays, Thursdays, and Saturdays.
> Performance to commence at half past three P.M.
> John Banvard Proprietor.
> F. Woodworth, Printer, 521 Pearl street.[32]

Did Banvard exhibit his show publicly or just for family and friends? The latter situation is more likely. The venue was probably the family's home. The program imitates the routines of professional entertainers whose exhibitions Banvard may have seen in New York, yet it is impossible to tell if his devices were professionally made or do-it-yourself concoctions. He may well have read John Babcock's popular *Philosophical Recreations, or Winter Amusements* that appeared in 1820 and was reprinted numerous times. It gave the young hobbyist detailed information about how to construct and use solar microscopes, camera obscuras, magic lanterns, and slides, and many other things.[33]

Both the American lantern-slide painter Joseph Boggs Beale and the famous English showman Albert Smith are said to have constructed and exhibited miniaturized toy moving panoramas as children.[34] These were simplified versions of public spectacles, where a roll of pictures was moved in front of the audience by means of a hand crank, while a lecturer explained the pictures, and music was played in the background.[35] During the American Civil War, a schoolboy named Willie Kingsbury cut out pictures of soldiers and war scenes from *Harper's Weekly,* colored them, and pasted them into a scroll. With his self-made moving panorama apparatus, he gave performances for other boys and girls in the attic.[36] The Milton Bradley company encouraged children to create an active relationship with the moving panoramas it was producing. The booklet that accompanied the *Panorama of The Visit of Santa Claus to the Happy Children* (c. 1870) stated:

> After this descriptive lecture may have become old, it is suggested that the young members of the family take turns in preparing original lectures to be delivered at the exhibitions. The great variety of scenes admit of the greatest freedom in the lectures, and nothing can afford a better subject for compositions than these pictures, as thereby two objects are attained; first, the study of pictures, and second, the practice in composition.[37]

All in all, extensive educational efforts were made in the nineteenth century to provide children and adolescents hobbies that would actively involve them and persuade them to stay safely within the walls of the home. Victorian ideology attempted to harmonize the different generations, while keeping traditional gender divisions intact. However, in the late nineteenth century, pressures against the nuclear family and its domestic fortress began to grow. Women requested more freedom to visit the city space with other women and without a male chaperon. As controlled environments that embraced capitalist values, department stores and their display windows became a suitable destination for them, while ladies' camera clubs gave them a pretext to roam to public space and terrorize others by snapping pictures of unwilling subjects.[38] Young men also grew restless, beginning to frequent amusement arcades, pleasure beaches, and nickelodeons, as evidenced by anecdotes about the guilty pleasures they found by peeking inside Mutoscopes and other coin-operated picture viewers. Bicycles and automobiles also increased mobility, encouraging outdoor life and streaks into the unknown. All these trends were threats to the stable system of conservative values centered on the home.

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It was also possible to segregate oneself from the rest of the family unit without leaving the home. The Victorian bourgeois home, with its clear separation between public and private areas, usually provided potential hideaways behind closed doors. Devices like the stereoscope could help. As we have seen, however, it was often used in social situations in spite of a form that seems to invite seclusion. A powerful impetus for individual seclusion within the home was provided by the introduction of wireless and radio technology in the early decades of the twentieth century. They provided new ways of bridging the domestic interior with the world outside, and in real time. They did not only encourage passive receivership; it was soon discovered that amateurs could use parts to construct equipment and use it for active communication with other enthusiasts beyond traditional spatiotemporal limits. As Susan J. Douglas demonstrated in her classic *Inventing American Broadcasting 1899–1922* (1987), the emergence of radio amateurism was a widespread phenomenon with ample and often contradictory social and cultural implications.[39]

Radio amateurism led to intense technological do-it-yourself (DIY) tinkering, supported by scores of popular-science magazines that distributed both practical information and outlandish fantasies about the future possibilities of the still rudimentary technology. Radio amateurs gained admiration by their feats, but also notoriety; they were seen as self-made heroes of a new media culture and as prototypical hackers and crackers. For some, they were pioneers exploring an entirely new territory in the "ether"; for others, they were reckless pranksters whose widely reported deeds included sending U.S. warships on phantom missions and supposedly hampering the rescue efforts of *Titanic*'s survivors. The anger raised by such "achievements" made the authorities and the industrial-military complex join forces to limit radio amateurs' access to the ether. Radio communication was increasingly defined as a closed world of official public messaging. Its public dimension was molded into the broadcasting of music and words for mass recipients, who had been denied the possibility to "talk back." (Of course, shortwave radio users, who can send broadcasts around the world, continue to flourish.)

On the negative side, wireless and voice-based radio technology was accused of encouraging antisocial behavior among its hobbyists. This belief was captured by the image of the "boy in the attic"—a reclusive figure sitting alone in his chamber, hour after hour, turning knobs and donning headphones.[40] The situation led to a well-known public debate in the 1920s, when the father of a boy named Eric Palmer Jr. asked the authorities to

cancel his son's amateur radio license, because he believed that "the boy will die of undernourishment and lack of sleep and his mother fall a victim to a nervous breakdown" (see Fig. 2.5)[41] Similar concerns about obsessive and uncontrolled psychological immersion have been raised in many media contexts, including the television, the Internet, video games, and text messaging.

The tinkering hobby was also seen as something positive, as a way of uniting father and son, and even as professional training. For example, constructing miniature dioramas, three-dimensional scenes or landscapes (often enclosed in a shadow box that had its front side open for display), were promoted not only as a good hobby, but also as practice for jobs in industry and business. The October 1940 *Popular Science* offered "hints on constructing small dioramas for home decorations, window displays, and advertising or educational purposes."[42] Another article promoted the magazine's own construction kit for assembling a "miniature colonial kitchen." Instead of appealing to the boy hobbyist, assembling miniatures was suggested as a pastime for the whole family: "Father and son can cut out and assemble the furniture. Mother and daughter can help install the fixtures, as well as crochet tiny rugs for the floor and make curtains for the windows."[43]

The ideal of the tinkering family differed from the ideal that became increasing common after World War II, when television broadcasting began its triumphal march, and *automation* became a catchword in the industry
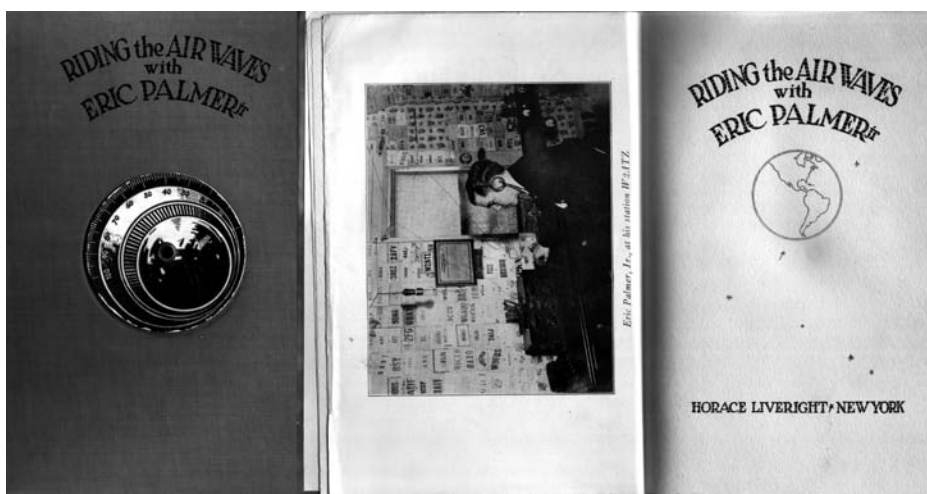

Fig. 2.5. Eric Palmer Jr.'s *Riding the Airwaves*, cover and title page. Author's collection.

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and the home alike. Iconic and idealized representations of the 1950s include countless variants of the young nuclear family glued to the TV screen in their brand-new suburban living room, the smiling housewife doing nothing in her wonder kitchen or by her automatic washing machine, men in white coats standing next to huge a mainframe computer, and the fully automated assembly-line. The guiding idea of the epoch was the reduction of human labor. As a consequence, the physical intervention of the human into the workings of the machine was minimized. Although that such a cultural condition promised to increase leisure time, some feared it would lead to alienation and a sense of uselessness. The situation was not particularly favorable for tinkering. Being a couch potato or using psychedelic drugs could be interpreted as a response to the ennui created by the brave new world of automation.

Conclusion: Playing Pranks on Winky

Against this background, the once-popular children television program *Winky Dink and You,* aired by CBS from 1953 to 1957, is intriguing. In the era of automation, it went against the current, anticipating the burst of interactive media that started almost two decades later. Whereas mainstream early broadcasting encouraged spatial separation from the screen and passive spectatorship, *Winky Dink and You* encouraged children to develop an active tactile relationship to the screen. They were asked to use Magic Pens to draw on the television screen (or, rather, on a sheet of transparent plastic attached to it) according to the instructions from host John Barry. Often, the goal was to save Winky Dink from hazardous situations, but the children could also try to solve textual riddles by drawing letters on the screen. Although the interaction between the program and the users was simulated rather than actual, it seems to have led to intense involvement, judging by the reminiscences found on the Internet.

In a particularly interesting comment, a former user describes how he deliberately acted against the host's instructions: "When Winky needed a ladder to get out of a hole, I would draw a cover on the hole. When he needed a parachute, I would draw an anvil to pull him down, etc. . . . I would tease my younger sister and tell her that I was making Winky die! Whenever she left the room crying, I would laugh and laugh. Winky was cool."[44] Such pranks could be interpreted as more than just childhood mischief; they represent an effort to take things literally into one's own hands and to initiate a true dialogue with the program flow, which even in this case was one-directional. Although not correct in a technical sense, it is significant

that one commentator characterized *Winky Dink and You* as "the world's first interactive video game."[45]

The participatory model proposed by *Winky Dink and You* never became standard in TV broadcasting, but it has had a long and vigorous life in the world of video gaming. The Magnavox Odyssey, brainchild of engineer Ralph Baer, working in the defense industry, was more than just a clever product, although its producers may not have fully noticed the momentous nature of the transformation they helped to initiate.[46] To Magnavox, the little device may have been just an accessory to the television set, a way to give the TV new uses and solidify their own business opportunities.[47] However, the Odyssey, and all the other game consoles that soon followed in its wake, questioned the dominance of broadcast television that had come to dominate the media landscape; instead of broadcast television's one-directional feed, the new generation of devices established a much more complex and multidirectional model. They did not, however, break out from the problems and schemes associated with the social forms of media usership. Issues like solitary gaming versus social gaming continued to be debated; they continue to this day. The Victorians already took part in this discussion.

This essay has demonstrated that domestic media, including video games, are intimately connected with the rituals and practices that constitute domesticity. To unravel their operations, one has to approach the issue from at least two directions. One the one hand, it is essential to understand the functioning of the media apparatus, including the predefined modes of looking (and hearing) it imposes on the user; on the other hand, it is equally important to understand the modalities of private life, including the constitution of the home as a site for social interactions. Media is never accepted into homes as such, in prepackaged forms and meanings; rather, its roles and identity are molded through continuous negotiations involving humans, the spaces they inhabit, and the specific codes they have internalized and apply in their daily operations.

Notes

1. This essay contains material presented as a lecture given at Kyoto University, December 19, 2008, at the invitation of Professor Hiroshi Yoshioka. It also incorporates, in modified form, material from an earlier essay published in English as "Elements of Screenology: Toward an Archaeology of the Screen" in *ICONICS: International Studies of the Modern Image,* Vol. 7 (Tokyo: The Japan Society of Image Arts and Sciences, 2004), 31–82.

2. Erkki Huhtamo and Jussi Parikka, eds., *Media Archaeology: Approaches,*

Applications and Implications (Berkeley: University of California Press, 2011).

3. Erkki Huhtamo, "Slots of Fun, Slots of Trouble: Toward an Archaeology of Arcade Gaming" in *Handbook of Computer Games Studies,* ed. Joost Raessens & Jeffrey Goldstein (Cambridge, MA: The MIT Press, 2005), 1–21.

4. Richard Chalfen, *Snapshot Versions of Life* (Bowling Green, OH: Bowling Green State University Popular Press, 1987).

5. See, for example, "From Cybernation to Interaction: A Contribution to an Archaeology of Interactivity," in *The Digital Dialectic. New Essays on New Media*, ed. Peter Lunenfeld (Cambridge, MA: The MIT Press, 1999), 96–110, 250–56; "Twin-Touch-Test-Redux: Media Archaeological Approach to Art, Interactivity, and Tactility," in *MediaArtHistories*, ed. Oliver Grau (Cambridge, MA: The MIT Press, 2006), 71–101; and "Seeking Deeper Contact. Interactive Art as Metacommentary," *Convergence*, 1, no. 2 (Autumn 1995): 81–104.

6. See "Magnavox Odyssey 2 Ad from 1980," Retroist, accessed July 15, 2010, http://www.retroist.com/2009/04/15/magnavox-odyssey-2-ad-from-1980/.

7. See Van Burnham, *Supercade: A Visual History of the Videogame Age 1971–1984* (Cambridge, MA: The MIT Press, 2003), 114–15 (family with Odyssey) and 282 (family with Atari 5200). In the latter, father, mother, son, and daughter are pictured playing together, their mouths open in awe.

8. Lynn Spigel, *Make Room for TV. Television and the Family Ideal in Postwar America* (Chicago: University of Chicago Press, 1992); and Cecelia Tichi, *Electronic Hearth: Creating an American Television Culture* (Oxford: Oxford University Press, 1991).

9. See Erkki Huhtamo, "Toward a History of Peep Practice," in *The Blackwell Companion to Early Cinema,* ed. André Gaudreault, Nicolas Dulac, and Santiago Hidalgo (Oxford: John Wiley & Sons, forthcoming 2012).

10. Richard Balzer, *Peepshows: A Visual History* (New York: Harry N. Abrams, 1998).

11. *Vues d'optique* were produced in great quantities in Paris, London, Berlin, Augsburg, and Bassano in Northern Italy. See Kees Kaldenbach, "Perspective Views," *Print Quarterly,* June 1995, http://www.xs4all.nl/~kalden/auth/perspectiveviews.htm.

12. Jürgen Habermas, *The Structural Transformation of the Public Sphere,* trans. Thomas Burger with the assistance of Frederick Lawrence (Cambridge, MA: The MIT Press, 1989), 43–51.

13. Mary Flanagan, *Critical Play: Radical Game Design* (Cambridge, MA: The MIT Press, 2009), chapter 3.

14. Asa Briggs, *Victorian Things* (London: Penguin Books, 1988).

15. Susan Tucker, Katherine Ott, and Patricia P. Buckler, eds., *The Scrapbook in American Life* (Philadelphia: Temple University Press, 2006).

16. The scientific principle of stereo-optical vision had been demonstrated by Charles Wheatstone in the 1830s with an open device that used two angled mirrors to align the two images, drawn from slightly different angles to correspond with the parallax difference of the human eyes. For scientific purposes,

the openness of the structure had both a practical and a symbolic justification. For general background, see Erkki Huhtamo, "Armchair Traveler on the Ford of Jordan: The Home, the Stereoscope and the Virtual Voyager," *Mediamatic* (Amsterdam), Vol. 8, No. 2–3 (1995): 13–23. Useful works on the history of stereoscopy include Edward W. Earle, editor, *Points of View: The Stereograph in America-A Cultural History* (Rochester, New York: The Visual Studies Workshop Press in Collaboration with the Gallery Association of New York State, 1979); and Françoise Reynaud, Catherine Tambrun and Kim Timby, eds., *Paris in 3-D: From Stereoscopy to Virtual Reality 1850–2000* (Paris: Paris Musées/ Booth-Clibborn Editions, 2000).

17. That normal photographs of buildings and places could serve this function is confirmed by a quotation from the British author William John Loftie: "It is pleasant to lean back in one's chair and be transported to distant countries at a glance." Quoted in Briggs, *Victorian Things,* 247. Briggs writes about the importance of the stereoscope on pages 132–33.

18. Such sets were sold by American companies like Underwood & Underwood and the Keystone View Company.

19. Reprinted in Earle, *Points of View: The Stereograph in America-A Cultural History,* 82.

20. From the text on the back of the card. There are two versions of the view, both numbered "11917" and copyrighted 1909, in the author's collection (one has the additional copyright date 1903 for B. L. Singley). Although the families and the settings are different, the elements are essentially the same: the children playing in the foreground, the older members sitting in their armchairs, and the storage cabinets for the stereoviews visible at the back. In one of the views, adolescent boys are also seen playing around a table. In one of the views, a lady is looking into the stereoscope, while a young man holds a stereoview; in the other, the ornate stereoscope has been placed on top of the storage cabinet at the back.

21. "Stereoscopic Slides," *Harper's Monthly,* June 1860. Author's collection.

22. Spigel, *Make Room for TV,* 11.

23. See Erkki Huhtamo, "Natural Magic: A Cultural History of Moving Images," in *The Routledge Companion to Film History,* ed. William Guynn (London: Routledge, 2011), 3–15.

24. James J. Shea, as told to Charles Mercer, *It's All in the Game* (New York: G. P. Putnam's Sons, 1960), 80. The book pretends the idea came to Bradley "with astonishing ease" as he was examining a German toy drum! (page 79).

25. Ibid., 81.

26. Milton Bradley Company, *The Philosophical Principles of the Zoetrope, or Wheel of Life* (c. 1867), 16 pages; copy in author's archive (location of the original is unknown).

27. The composition was published with the permission of The London Stereoscopic Company, which held the British patent for the zoetrope. The only known copy is at the Bill Douglas Centre Collection, University of Exeter. It

was accessed August 19, 2010 and is available online at https://collections.ex-eter.ac.uk/repository/handle/10472/33. The picture shows 13 ladies around the device and 17 gentlemen, most of whom are in the background, except for one who is sitting by the table with two of the ladies. A single child, a girl, is standing on a sofa in the foreground.

28. The booklet suggested "much sport may be produced by having some witty person give an exhibition, forming his own original combinations, and giving at the same time suitable descriptions of the several scenes" (page 10). This suggestion about the zoetrope as an instrument for storytelling and performing goes against the nature of the device and has to my knowledge not been tried.

29. William Hooper, *Rational Recreation* (London: Printed for L. Davis, J. Robinson, B. Law, and G. Robinson, 1774).

30. Morley Adams, ed., *The Boy's Own Book of Indoor Games and Recreations: An Instructive Manual of Home Amusements* (London: "The Boy's Own Paper" Office, not dated), 121–28.

31. Ibid.

32. I have seen the only existing copy on microfilm (Banvard Family Papers, Roll 1, Minnesota Historical Society). The broadside has been hand-dated "1820s" by a later hand.

33. John Babcock, *Philosophical Recreations, or Winter Amusements: a Collection of Entertaining & Surprising Experiments [. . .] Together with the Wonders of the Air Pump, Magic Lanthorn, Camera Obscura, &c. &c. &c. [. . .]* (London: Thomas Hughes, 1830), 164; on magic lanterns, 160–65.

34. According to Boggs Beale's handwritten diary, he built his panorama from January to August in 1856. It was a roll two feet high and 150 feet long, and contained 70 scenes. I have read a copy of his diary at the American Magic Lantern Theatre Archive, East Haddam, Connecticut (made from the original at the library of the Historical Society of Philadelphia). For Smith's toy panorama, see his *The Story of Mont Blanc* (London: David Bogue, 1853), 2. If Smith really did create one, it would have been before the 1820s.

35. See Morley Adams, ed., *The Boy's Own Book of Indoor Games and Recreations: An Instructive Manual of Home Amusements.* The topics include: "How to Make a Diorama," [moving panorama] 82–88; "Peep Shows: How to Make and Work Them," 121–28; "Artificial Fireworks: How to Make and Work Them," 128–34; and "Dissolving Pictures," 118–21. Another book that contains similar information is A. Rose, *The Boy Showman and Entertainer,* (London and New York: George Routledge & Sons and E. P. Dutton & Co., not dated). The topics include "A Panorama," 142–47; "Peep Shows," 36–43; "Artificial Fireworks," 94–107; and "Shadow Shows," 176–93.

36. Alice Eliza Kingsbury, *In Old Waterbury: The Memoirs of Alice E. Kingsbury* (Waterbury, CT: Mattatuck Historical Society, 1942), chapter 2.

37. "Directions to the Proprietor of the Santa Claus Panorama" (Springfield, MA: Milton Bradley Company, not dated, circa 1866–70).

38. See Erkki Huhtamo, "Pockets of Plenty: An Archaeology of Mobile Media," in *The Mobile Audience,* ed. Martin Rieser (Amsterdam: Rodopi, forthcoming).

39. Susan J. Douglas, *Inventing American Broadcasting 1899–1922* (Baltimore, MD: The Johns Hopkins University Press, 1987). The following paragraph relies on Douglas's work.

40. William Boddy, "Archaeologies of Electronic Vision and the Gendered Spectator," *Screen,* Summer 1994, 110–11. Boddy also discusses the case of Eric Palmer.

41. Extract from the father's letter to the Radio Commission, quoted in the first-page article by Orrin Dunlap, Jr. in the *New York Times* ("Eric Palmer Jr.'s Radio License Suspended: Admiral Bullard Sends Him Kindly Advice," October 21, 1927). See also Eric Palmer Jr., *Riding the Airwaves with Eric Palmer Jr.* (New York: Horace Liveright, 1930), 86. A copy of this rare book, which has a turnable radio dial embedded in its front cover, is in the author's collection.

42. Herbert Lozier, "Scenes in Miniature," *Popular Science,* October 1940, 199.

43. "Miniature Colonial Kitchen: You'll find it easy to match this beautiful model by using the materials in our new diorama construction kit," *Popular Science,* November 1940, 207.

44. Reminiscence, quoted by Billy Ingram, "Winky Dink & You," accessed Sept. 11, 2011, http://www.tvparty.com/requested2.html

45. Billy Ingram, "Winky Dink & You," accessed Sept. 11, 2011, http://www.tvparty.com/requested2.html.

46. Baer and his team developed the Odyssey at Sanders Associates, a military electronics company based in New Hampshire. Steven L. Kent, *The Ultimate History of Video Games* (Roseville, CA: Prima Publishing, 2001), 21–26.

47. Ironically, this worked for others, but not for Magnavox, which soon sold its consumer electronics division to Philips and was sidetracked from the booming video game console business.