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Coin-Operated Americans

Carly A. Kocurek

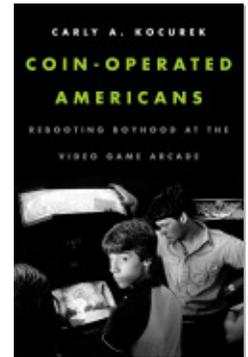
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THE MICROCOSMIC ARCADE

PLAYING AT THE CULTURAL VANGUARD

LIKE ALL CULTURAL FORMS, video gaming has its origin myths. One myth goes something like this: in 1972 Nolan Bushnell and his company, Atari, released *Pong*, the first commercially successful video game. Atari sold the computerized table tennis game to bars, bowling alleys, pool halls, and other amusement spaces targeting adults with money to burn and a desire for novelty. As Atari and other companies released more and more games, including perennial favorites like *Space Invaders* (Taito, 1978; see Figure 4), *Sea Wolf* (Midway, 1976), and *Centipede* (Atari, 1981), the video game cabinets began to crowd out other coin-operated entertainments in older businesses and to fill new arcades dedicated solely to these new machines. Interestingly, these arcades were frequented not by the punks in leather jackets who lurked around pool halls but by bright young boys with a penchant for technology; video games' impact on these young men was a source of moral concern, with worry over the violent content of Exidy's *Death Race* (1976) causing the first video game moral panic. Worries about youth access to the machines did little to curb enthusiasm and at times drove popular interest.

By the early 1980s, mainstream media outlets from *Life* magazine to the *New York Times* were reporting on the youth trend, and arcades had become mainstays in shopping malls, strip malls, and small-town storefronts across the United States. The coverage placed video games alongside other popular culture phenomena like the emergence of hip-hop or in the context of emerging business and technology practices like computerization, even while raising concerns about the games' cultural, psychological, or even physical effects. But the period that many consider the real glory days of the video game arcade was short-lived.

In 1983 the video game manufacturers of both home and arcade systems were confronted with their first industry crash; numerous issues, including overproduction of particular titles, poor quality control in manufacturing, and an increase in competition in the console



FIGURE 4. Two people watch as a third plays *Space Invaders* in an arcade in Santa Cruz, California.

Photograph by Ira Nowinski, 1981 or 1982.

Courtesy of Department of Special Collections and University Archives, Stanford University Libraries.

market, caused the crash. While the industry as a whole recovered and prospered through the growth of the home gaming market and the influence and innovation driven by international companies like Nintendo, most arcades did not. Within a few years, towns that had previously boasted numerous arcades were left with nothing more than a few grimy machines in the corner of the local Laundromat or bar: the video game as arcade machine had returned to the place of its initial success, and the arcade lined with video games seemed to be a fluke of history. Today, although video gaming itself has continued to gain cultural significance, the video game arcade as a physical space persists as an object of nostalgia, an entertainment gimmick, or a nerd mecca for the truly dedicated, even as new arcades open, making specific appeal through these forms.

The neat history I have just presented is thoroughly reductive, a popular fiction of a popular medium; debates over how the story of video gaming should be told are elaborated on and complicated in this book. Now an entertainment industry so substantial it regularly outperforms Hollywood's profits, and an arena for competition so fierce as to support an entire professional circuit, video gaming has come of age as an established industry with its own standards, professional organizations, degree programs, and lobbying groups.¹ The history of the video game as a medium offers insights into the industry's evolution, but the history of gaming as cultural form illuminates the evolution of a set of cultural beliefs now central in the digital age. As the wired generation gives way to the wireless generation, and as digital natives become the cultural elite, we are seeing the refinement of values and ideals readily observed in the arcade culture of the 1970s and 1980s.

Like the industry itself, general concepts formed prior to the crash, of what gaming and gamers can and should be, have survived and flourished, and continue to influence contemporary notions of youth, masculinity, and technology. Understanding how the formative years of gaming culture continue to influence these conceptions goes a long way toward understanding the foundations of contemporary digital culture—not only digital entertainment media but also the digitization of everyday tasks. The video game arcade, after all, exposed thousands of youths to computer technologies years before computers became commonplace in offices, classrooms, and homes

across the United States. The arcade may indeed still exist in some permutations as a physical space, as a dusty relic, a nostalgic space for thirty- and fortysomethings, but more significantly, it persists as a mode not only of play but of economic decision making and cultural values.

Gameplay in arcades privileges and values individualized competition, technological fluency, and a type of consumer spending often likened to gambling; it also reinforces what have become prevailing ideas about masculinity. As the United States has shifted to a technologically driven service economy, these values have become more broadly diffused through culture. In some ways, we are still in the arcade; the values of the arcade have become the values of our daily lives, even encompassing our labor practices and financial habits. The arcade may have been an entertainment space for youth, but it was also a training ground: the first place a generation encountered computers and learned what it meant to play, to work, and to live in the age of computerization.

This chapter offers a tour of an imagined golden era arcade, drawing from histories of actual arcades (like the one at Pier 39 shown in Figure 5) and surviving arcade cabinets as well as popular press coverage of games and gamers, interviews with arcade owners and gamers, and my own experience, both as a child in a late-1980s arcade and as an adult exploring arcades across the United States over the past decade. The arcade nearest my own hometown was Aladdin's Castle, where my brother and I played until the mall's respectability took a sharp turn south, and rumors spread about a crack dealer operating out of the arcade's back corner.² More recently, I have frequented arcades in Austin, Texas, and Chicago, and visited arcades across the United States, particularly in California, Illinois, New Hampshire, Oregon, New York, and Washington.

Rather than analyze individual games, I treat the machines as objects—as toys with didactic implications—and explore the cultural and economic environment they existed in, both the immediate geographic environment of the arcade and the historically and nationally defined environment of the United States from the mid-1970s through the early 1980s. This tour offers context for a discussion about the meaning of the video game arcade as a place where computers became culture, boys became men, and simulation became a

way of living. We travel through this imagined space not by moving from machine to machine, shedding quarters along the way, but by moving from concept to concept, individually exploring the arcade's key components: sight, sound, and play. The arcade as imagined here is both a memorial to the modern era and a map to the postmodern age we have come to know as the present—a place we have been and still are.

To journey through the arcade conceptually is to confront the digitization of culture, a process that has transformed everything from banking and education to film production and television viewing practices, and also to think critically about the role of money in daily life. The tour proceeds to a consideration of the underlying business structure of the arcade, offering historical perspective on the development of video gaming as a public commercial practice



FIGURE 5. Pier 39 in San Francisco has long included coin-op games as part of the area's attractions. This photograph of a bank of video games is from Ira Nowinski's collection of arcade photographs taken in 1981 and 1982. Courtesy of Department of Special Collections and University Archives, Stanford University Libraries.

involving not only individual gamers/consumers but also manufacturers, distributors, arcade owners, machine operators, and others working in and around the industry. Early video gaming was a set of consumer practices, but it also involved the production, marketing, and distribution of the machines—all of which influenced the format of the games and shaped the kind of consumer behavior that proved essential to the games' early success.

While the coin-operated industry has a lengthy history, including Victorian-era amusements like the Kinetoscope and the development of vending machines and popular amusements like jukeboxes and pinball, the overnight craze triggered by video games was unusual. Within a few years, video games came to be widely deployed as coin-op (see Figure 6). The games' appeal to boys, who became the most visible consumers of the entertainment form, also set the games apart from earlier coin-op technologies. The vitriolic response many moral guardians had to the games stems not only from the young age of many gamers and the novelty of the medium but also from the longer history of coin-operated amusements, which had often served as gambling machines or avenues for salacious peep shows and frequently faced regulations and bans. Video gaming was thus a site where old social and cultural worries about youths' access to commercial entertainments collided with anxieties about emergent technologies, as well as broader cultural and economic shifts. This discussion of the arcade as a historical site requires an understanding of the arcade as a physical site, so the tour begins with the physical and sensory phenomena that create the arcade experience.

SIGHT

The arcade beckons visually, its name blasted in neon or cartoonish script, the machines inside visible in flashes through the windows or open doors. The most popular games are surrounded by clusters of onlookers, some of whom may have added a quarter to the top of the cabinet to hold their place in line. The fluorescent lighting is low in much of the space to maximize the visibility of the machines' cathode displays and allow the screens' glow to light players' faces. The cabinets offer the flash of concert posters, screaming their names in lurid orange and yellow, attempting to entice with images of



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FIGURE 6. An advertisement for tokens from 1983 evinces the wide popularity of coin-op games, including tokens from national brands like Coca-Cola, Holiday Inn, and Pizza Hut.

intergalactic robots, implausibly leggy cartoon characters, and bizarre creatures. The unoccupied games play in the attract mode, displaying top scores and titles and short bursts of simulated play. The screens tease. The giant ape takes the girl hostage and rushes to the top of the screen; aliens invade in pixilated unison, making steady progress toward the earth. The alternating images on the screens make the light in the room flash and shift in color.

If this is a particularly modern 1980s arcade, the video games may dominate the space completely; in an older one, pinball machines may line one wall or dominate one corner, or perhaps there are pool tables. If this is the case, the older patrons may be absorbed in rounds of pool or pinball wizardry, leaving the newer machines for the younger customers. Farther from the door, ticket redemption machines challenge players to Skee-Ball and Whack-A-Mole, or encourage them to try their hand at quarter pushers. Occasionally, someone hits a jackpot, and a machine spews tickets in a long ribbon, but usually tickets are dispensed in short bursts. One ticket for 200 points at Skee-Ball. Two tickets for scores over 240.

A Formica counter tops a glass case along one wall. Plastic toys, temporary tattoos, mood rings, and candy fill the case. Labels indicate ticket values. The most luxurious prizes sit on shelves and hang from hooks on the wall behind the counter. Oversized stuffed bears and dogs stare vacantly with plastic eyes. Board games, jump ropes, and classic toys seem less enticing than the RC cars and other top prizes, some of which have sat so long that there is a visible film of dust on the tops of their boxes. At the other end of the counter, there are cans of soda and bags of chips for sale. Peanuts. Funyuns. M&Ms. Even though the arcade sells sodas, employees watch with sharp eyes for anyone daring to rest one on the machines, directing transgressors to toss the half-drunk Coca-Cola or relocate to one of the desolate picnic tables.

A manager makes rounds clutching a ring with dozens of keys. He opens machines to refill ticket rolls, clear quarter jams. Occasionally, he gives up his repair efforts and tells one of the younger employees to mark the machine with a sign made from copy paper, "Out of Service" scrawled in black marker. Mall security guards pass through on their rounds. Parents duck in to retrieve their children, deposited during errands or perhaps lingering too long on their way home

from school, sometimes wheedling or threatening to pry them away from especially engrossing games, sometimes giving in and handing over another pocketful of change, with a warning that mom or dad will be back in half an hour.

SOUND

Imagine entering the arcade. As the machines blink and blast, players punch and pound at them, the hard plastic buttons clacking against their casings. Change machines spill quarters in a noisy avalanche, or a teenage employee doles tokens into plastic cups. You can hear the frantic pace of play almost before you see it. There can be no quiet here; even if the place is abandoned during a midafternoon dead spell, the machines continue untended, their MIDI files playing in an infinite-loop siren song of computerized audio, the older machines chiming in with 8-bit audio boops and bleeps.³ The pinball machines in the back corner clank mechanically, remnants of the machine age. Other machines bleed even stranger sounds, like the voices of *Q*bert* generated by randomized Votrax-speech synthesis. Perhaps the arcade employees are making announcements over the PA, or a cluster of children are singing “Happy Birthday” at a long table near the heart of the arcade. The voices mix with the machines; they pick up their pace. Conversations here are clipped, efficient, divided neatly into the downtime between levels.

This cacophony mingles with the mall’s piped-in Muzak, which drifts in ever so faintly, a reminder of the cool serenity of the department stores farther down, of the perfume counters, shoe departments, and handbag sales. Of suits, of ties, of responsibility or adulthood or both, and security guards, reminding you, ever so helpfully, not to loiter.

PLAY

You are inside the arcade. Pick a quarter from the loose change in your pocket and choose a machine, any machine. Perhaps it is *Pac-Man* (Namco, 1980) or maybe *Centipede* (Atari, 1981) or *Galaga* (Nintendo, 1981). It does not matter which you choose. Put your quarter in the slot where the machine swallows it with a faint metallic clank

before the game begins to announce itself, waking from its attract mode and switching into assault. Defend the planet from aliens, avoid the chasing ghosts, gobble cherries, dodge barrels. Make it maybe sixty seconds, or survive the first level on your first quarter on a game you have not played before, and you have proved yourself exceptional. Go again. Find yourself dead, confronted with the listing of top players—of players better than you, of players who would not blow through twelve bucks in quarters in forty-five minutes, players who know what comes next. After level one, level two, level three. Go again. More quarters. You are sweating in the refrigerated air. Go again. The last quarter burned, and you hit the machine hard enough that it stings your hand. You feel foolish, but no one notices. They are too busy watching some kid down the row who has been playing steady for an hour on one quarter. Perhaps at this point you have had enough and leave. Or maybe you stay. You feed the change machine a five dollar bill and stuff your pocket with more quarters. You challenge someone to two player. Maybe you win. Maybe you lose. Maybe it is getting late, and you realize that you have neglected your algebra homework again.

THE ECONOMY OF PLAY

Perhaps, like many gamers, you have never been to an arcade—at least not an early one—and the experience I have just described is foreign to you. Or perhaps you spent much of your childhood growing pale and tense in a place like the one I have described. Although the arcade I played in as a child did not close until the mid-1990s, the industry crash of 1983 sounded the death knell for what became a kind of protracted agony for video game arcades in the United States. No single cause triggered the crash, which resulted from a host of factors, including a general decline in the industry and rapid inflation (see Figure 7). The quarters the machines took in were increasingly devalued, which compounded the fact that there were fewer of them as more and more gamers switched from the public space of the arcade to the private space of the home, plugging in Atari 2600s, Intellivisions, and other early home gaming consoles or booting up personal computers.

Playing arcade games is expensive, and the cost is particularly pronounced for inexperienced players. When I popped a quarter into a

Galaga machine for the first time in 2008 at a movie theater in north Austin, my money bought me just 65 seconds of play. I had not previously played *Galaga* that I can remember; by the time I was old enough to be dropped off for a few unsupervised hours at the shopping mall that housed the only arcade in my home county, *Galaga* was obsolete. I was a novice player. That first game cost me 25 cents and lasted 65 seconds, and was followed by a second lasting only 55 seconds. In that round, I played a total of ten games, which varied in length from 50 seconds to 136 seconds, with an average of just under a minute and a half. Within fifteen minutes, I had blown through \$2.50. Because of inflation, the true cost of those fifteen minutes in 2015 is markedly less than those same fifteen minutes would have cost in 1981 when the game was new, even if the number of quarters spent in both cases was the same.

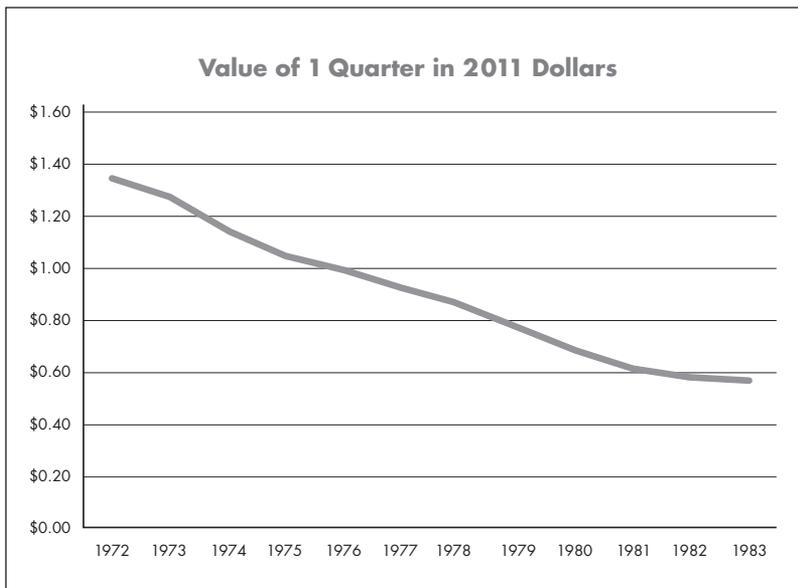


FIGURE 7. Inflation during the 1970s was a significant problem, especially for an industry that relied on standardized coin-based prices. The value of a quarter from 1972 to 1983 roughly halved. Data from the Consumer Price Index Calculator provided by the Bureau of Labor Statistics. “CPI Inflation Calculator,” http://www.bls.gov/data/inflation_calculator.htm.

I mention my experience playing *Galaga* not to engage with the specifics of that particular game but to serve as an introduction to the consumer spending demanded by coin-operated arcade games. While admittedly I am not good at *Galaga*, many of the players who encountered the game early in its release would not have been either. Even working from the assumption that I am exceptionally bad at *Galaga* and that my average game time is half of what it should be, the price of gameplay is significant, with an hour of play likely running between eight and twelve dollars. Presumably arcade players increase their skill and maximize game time (even in the brief time I spent playing *Galaga* at the theater, my skill improved), but doing so requires a substantial financial investment in play. Arcade gaming requires money; arcade gaming diligently enough to improve skills and become competent requires even more money. The cost of arcade gaming, like the cost of earlier coin-operated amusements in preceding decades, made it suspect to moral guardians and also placed the games in an emerging marketplace of amusements and experiences.

I turn here to the arcade's place in this marketplace, interrogating the financial values embedded in early coin-operated video game machines and in early coin-operated video game arcades. These games prepared players to serve both as laborers in the emergent white-collar service economy, where computers would be at the center of professional activity, and as investors/players in an increasingly deregulated marketplace. They introduced a generation of young men to computers as approachable, everyday technologies, just as the workplace was entering a period of massive computerization. The move to computerization also reflected necessary shifts in ideals of masculinity. The rise of a service economy, for example, has precipitated an increased emphasis on skill as a gendered differentiator of socioeconomic class. R. W. Connelly summarizes these shifts, pointing out, too, that class exclusion combined with racism, as under apartheid, can make this system especially brutal:

Where work is altered by deskilling and casualization, working-class men are increasingly defined as possessing force alone. . . . Middle-class men, conversely, are increasingly defined as the bearers of skill. This definition is supported by a powerful historical change in labour markets, the growth of credentialism, linked to a higher education system that selects and promotes along class lines.⁴

Under this emergent system, the potential technological skill to be derived from games made for a powerful defense, offering the possibility of socioeconomic ascendance and middle-class respectability. Perhaps the games were teaching something of value.

But this didactic function also made video games suspect, as they carried with them an emergent set of values and practices that seemed at odds with existing cultural norms and ideals: an embrace of heavily individualized, as opposed to organizationally based, competition; an acceptance of credit, most visibly consumer credit, as a part of daily economic life; the acceleration and propagation of novel amusements as a primary category of spending; and the celebration of those same technological, specifically computer associated, abilities. The competitive practices demanded by the arcade and celebrated by a broader culture of video gaming are at odds with the mid-century's "organization man" model of success, in which even the most successful individuals made their names through corporate or military outlets. In his comprehensive history of American masculinity, Michael Kimmel points to the 1970s, the early era of the video game, as a time of particular crisis. Mobilization against the Vietnam War was part of a wider generational conflict that, Kimmel argues, "was a central expression of the growing crisis of masculinity."⁵ This crisis found expression in foreign relations through the divergent articulations of and anxieties about manhood expressed by three U.S. presidents: Lyndon Johnson, Richard Nixon, and Ronald Reagan. Compared with midcentury visions of manhood, competitive video gaming is a closer parallel to a postindustrial, heavily individualized labor market like that described by Connelly—one that celebrates the skills and victories of individual achievements, where workers fulfill work roles as consultants, contractors, and freelancers.

Because gameplay has ideological and didactic value and serves in creating a technological labor force, both individual games and the places they are played have become lightning rods for moral reformers whose social standards reflect existent norms rather than the emergent values of a society in transition. Arguments about the moral and economic implications of particular video games have been the bread and butter not only of public moral guardians seeking to police gaming but of numerous scholars, as evidenced by the work of researchers like Steven J. Kirsh, and Lawrence Kutner and Cheryl Olson.⁶

In writing about *The Sims*, Steven Poole says that the problematic political underpinnings of *The Sims* may be unavoidable: “Perhaps it is inevitable that, as products of decadent late capitalism, most videogames will, consciously or not, reflect the same values.”⁷ While Poole’s argument is specific to a single game, many games work through the cultural values of late capitalism not only at the levels of gameplay and narrative but also in the kinds of economic and cultural practices they encourage. In particular, the coin-operated video games of the 1970s and 1980s were uniquely positioned to introduce the young to emergent consumer patterns and economic practices through the pay-for-play arcade environment described earlier.

This introduction to a specific set of consumer experiences and values warrants critical inquiry, especially as it offers insight into the nervous response that many moral reformers had (and continue to have) to video games.⁸ While the temptation to dismiss negative responses to gaming as the hand-wringing of overly worried moralists may be strong, doing so is unfair—both to those who would have wanted to keep video games far from children and to the games themselves. To ignore would-be moral reformers is to undermine the notion that community standards are in flux and may change in ways that prove dangerous. While not everyone who participates in these kinds of discussions is right in the long run, the issues raised and rhetoric deployed throughout these cultural conflicts provide insight into the concerns of the kinds of community figures (PTA presidents, parents, ministers) who often have profound influence even when they do not garner name recognition for themselves. To argue that video games are not a legitimate source for serious social concern would be to argue against their cultural significance. As Jesper Juul points out, “Games are learning experiences, where the player improves his or her skills at learning the game.”⁹ I posit in this chapter that this is true both at the level of the individual game and at the level of the arcade and the surrounding cultural environment; the player improves his or skill at learning games at a content level, but also improves his or her skill at working within the values system that these games operate in. Similarly, I argue moralists’ concerns about video games result from anxieties over the emergent values system—one marked by the embrace of individual success, technological skill, credit, and spending on entertainment and novelties.

Video games were not the first wave of novel amusements to become a major fad or to provoke cultural anxieties. Neither coin-operated games nor arcades are unique to the computer age; Charles Fey produced the first slot machine in 1895, and the first coin-op pinball game dates to about 1929. Both innovations are American in origin and provide a clear historical link between coin-op games and gambling. While slot machines always had gambling as a central function, by 1934, some pinball machines were designed to offer payouts.¹⁰ Not all coin-op technologies can be linked to gambling; the oldest popular motion picture technologies in the United States include coin-op devices like Thomas Edison's Kinetoscope, released in 1894.¹¹ But these technologies, too, were often viewed with suspicions, and while coin-operated amusements were staples at midways and boardwalks after the turn of the century, they were also persistent targets for moral reformers.¹² Whether gambling machines or less overtly reward-based amusements, arcade machines of all kinds serve the economic purpose of accruing wealth, one coin at a time, for their owners and operators (a theme at the heart of the advertisement in Figure 8). The efficiency with which machines serve that purpose, however, depends both on factors such as machine placement and machine downtime, which are within the control of operators, and on factors external to operator control. The popularity of individual machines can be addressed through operators' adjustments in machine placement or choice, but other factors, including broader economic fluctuations like inflation, are more difficult to respond to.

Even cursory analysis of the real cost of gameplay reveals the impact that inflation had on the coin-op industry of the 1970s and 1980s. Figure 7 shows the progressive devaluation of the quarter, which had become the base monetary unit of the coin-op industry, during the video game boom. Adjusted for inflation to 2011 dollars, a single run at a quarter-operated video game would have initially cost well over a dollar, with the price dipping below the dollar mark in 1977, then steadily declining to a real cost of less than half of the 1972 value by 1981. While some game designers attempted to alleviate this issue by raising the cost of gameplay to fifty cents and machines sometimes included options by which operators could adjust costs, the effects of inflation on the coin-op industry were far-reaching and probably



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FIGURE 8. This advertisement from 1983 for Music-Vend, a coin-op distributor, relies on a quarter pun and showcases a coin-studded cake.

hit video game operators especially hard, as the most technologically sophisticated machines usually required the highest initial investment. That the prices for games were often bound by physical limitations of the machines and their settings created difficulties in modifying older machines to accept higher prices; even on newer machines, prices could be raised only in twenty-five-cent increments or by installing new coin acceptors.

Bushnell and Ted Dabney founded Atari in 1972 explicitly as a video game company, but early manufacturers of video games were a mix of newly founded companies like Atari and Exidy that produced video games primarily or exclusively and older manufacturers like Bally and Rock-Ola, which had a history of producing other kinds of coin-operated machines, including bar games like pool and shuffleboard and jukeboxes. Video games are now indisputably their own industry, but at the outset they were largely a spin-off of other industries, including the coin-op industry, the television industry, and the computer software industry. Games developed for play on consoles and home computers now dominate the industry, but coin-operated games initially proved both financially viable and highly visible. Indeed, as coin-op video games were often produced by some of the same companies that manufactured earlier coin-operated amusements, video game machines circulated through some of the existing networks that supported distribution of earlier coin-operated machines.

Distributors purchased machines from manufacturers and then leased or sold them to operators who placed them at locations like bars, restaurants, bowling alleys, Laundromats, or arcades. The location owner and the machine operator divided the income from the machine or machines, usually on a 50/50 or 60/40 split. Factors influencing the split included the initial cost of a particular machine, its popularity, and the desirability of a particular location. These two parties would split machine revenues, with the machine operator taking responsibility for machine repair and maintenance, and the location operator absorbing the day-to-day costs of powering the machines. Arcade operators sometimes bought machines outright, which meant that they saw a higher percentage of machine revenue become profit, as they did not have to divide the income with a machine operator, but this practice was often seen as a disruption of industry operations

and could push distributors and those who leased machines to operators out of the business. Regardless of industry controversy, the division of machine revenues contributed to the concentration of video games in arcades, since the clustered machines would be easier to service and maintain either by the route operator or by the arcade owner. Arcade owners who owned machines outright would have seen a higher financial return on individual machines that they operated than individuals operating machines at nonarcade locations, as arcade owners would not have had to split the machine's profits with the location.¹³

At the time that video games first emerged, other coin-op technologies such as cigarette and soda machines, jukeboxes, pinball, foosball, and pool were all in circulation. But while these were steady earners, none had the seemingly magnetic appeal for consumers that video games held; video gaming was lucrative for long-term operators and doubtless lured others into the business, as the intense media coverage made games seem like an avenue to fast riches. The opportunity to attract younger customers meant existing operators could expand their market; this appeal to youth dovetailed with industry efforts to increase respectability through family fun centers and other wholesome businesses. Video game-specific arcades emerged partly because many existing outlets for coin-op amusements like bars had unsavory connotations and were considered inappropriate environments for youth. In the arcade, video games became the primary attraction, not a secondary revenue generator as they were in most other locations. Further, the all-ages arcades enabled operators to reach a broader audience than adult venues could manage. Video games also contributed to the rise of "family fun centers" that featured coin-op amusements alongside other attractions like go-carts, batting cages, or miniature golf.

The change in venues from bars to family fun centers and arcades contributed to shifts in the audience for video games. Both adults and children would have had incidental encounters with early video games in public spaces outside arcades—trying a game out of boredom at the Laundromat, for example. Games in arcades were less encouraging of this kind of casual interaction; the arcade would have been the destination, and video games (or video game-related socializing) would have been the primary reason to enter the

venue. Video game arcades attracted players who already knew they liked video games, even as they attracted casual players curious about video games and passersby, as was certainly the case for arcades in busy retail districts and shopping malls (or, as shown in Figure 9, bus stations). Contemporary representations of classic arcades frequently portray them as male-dominated spaces, but this is only partly true. Bushnell maintains that 40 percent of the coin drop on Atari's *Pong* came from women, and several individual gamers and arcade owners I interviewed stated that, while girls were a minority among arcade gamers, they still formed a significant percentage of the players.¹⁴ About 20 percent of the competitors on the video gaming game show *Starcade* were girls and women. Studies of arcade patrons revealed a significant number of girls in the arcade both as players and as observers.¹⁵ A 1981 Gallup youth survey found that 93 percent of teenagers played video games, with only minor differences across gender: 96 percent of boys and 90 percent of girls said they “ever



FIGURE 9. Benjamin Stone plays *Donkey Kong* at the Greyhound bus station in St. Louis, Missouri, during the 1980s. Snapshot photograph available at <https://www.flickr.com/photos/benchilada/7180304860/>. Licensed under Creative Commons and printed with permission.

played video games,” and 11 percent of boys and 9 percent of girls admitted to playing two or more hours a week.¹⁶

This discrepancy in how the gender breakdown of arcade gamers is remembered may reflect changes in the audience for video games over time. Perhaps the concentration of games in dedicated arcades cut the number of women players as the games were moved into spaces that catered to teenage boys. *Pong* may have had an unusually high percentage of women players because of its initial placement in bars, not arcades. Individual arcades likely had significant differences in patronage as well. Multiple interviewees who spoke to gender divisions in the arcade guessed that girls and women made up roughly 25 percent of players.¹⁷ There were, at the very least, some female players in the arcade. The social habits of adolescents likely also played a role in how the arcade was remembered. Much research shows that young men participate extensively in homosocial interactions; this may mean that the boys playing in the arcade interacted primarily with each other even when girls were also present.¹⁸

While arcades may have been more or less comfortable for various types of patrons, the cost of gameplay doubtless also affected who played the games, just as it affected who owned the games and where they were placed. The relatively high cost of individual instances of gameplay contributed to the rapid diffusion of video games, as savvy operators would have seen substantial profits. A 1977 advertorial from Amalgamated Industries' North Texas division boasted that “many machines have been known to yield in excess of \$100 a week”—the modern equivalent of nearly \$400.¹⁹ The advertorial implies that video game machines could be a door to rapid wealth for the people who put games in the right locations; the suggestions for appropriate locations—cocktail lounges, finer restaurants, yacht clubs, college student centers, and golf clubhouses, among others—speak to an assumption of adult and young adult players with disposable incomes. A 1982 article placed the average yield for an arcade machine at a more conservative \$90 weekly, with the investment for a new machine running roughly \$2,500. Working from these numbers and the assumption that the location operator and the machine operator split profits evenly, in just over a year a machine with an average level of income would take in enough money, even after being split among the location and machine operator, for the machine operator to pay

off his initial investment and begin making a profit. Of course, these promises of profits may have been exaggerated to lure buyers.

As video games clustered in arcades and developed a substantial audience among teenagers, those anxious about the potential dangers of the arcade viewed the high cost of gameplay as insidious. Numerous articles from the early 1980s document attempts by cities and counties to curb gaming, and these frequently point to the money that teens were spending on play. Several gamers I interviewed insisted that the money they spent playing video games was not given to them by their parents but earned by performing household chores, collecting bottles and cans for return deposits, or handling newspaper routes or other odd jobs.²⁰ While this does not necessarily suggest great affluence, it does suggest a degree of economic stability: since these players had discretionary income, they were able to fund their gaming because their earnings were not required to support the total family income. The cost of gaming imposed distinct limits on who could game and how much time and money they could spend playing. Mark Hoffman, who worked at Twin Galaxies in Ottumwa, Iowa, as a teenager, said he became interested in gaming only after his interest in computers snagged him a job at the arcade, where he enjoyed unlimited play as a perk; even as a teenager, the cost of gaming seemed wasteful to him, partly because of his family's socio-economic status.²¹

PLAYING WITH FREE SPEECH

While teenage players were doubtless aware of the money they were spending, they often viewed the income as truly disposable and did not worry about the overall cost. Adults observing these gamers' spending habits, however, saw them as a serious community problem. Many communities organized against arcades. Some towns placed high taxes or expensive licenses on machines, which discouraged operators from expanding their placements. Bans and restrictions were another frequently employed strategy, with some of these limiting the number of machines in a single location, effectively preventing arcades from opening. Legal proceedings related to efforts to curtail the spread of video games in Mesquite, Texas, demonstrate how games were seen as a threat to the appropriate use of time and

money. In a February 1982 article on the U.S. Supreme Court's decision to postpone judgment in *City of Mesquite v. Aladdin's Castle, Inc.*, a *Los Angeles Times* reporter summarizes the conflict, saying that "city residents and officials complained that teen-agers were wasting time and money on the games."²² Critics of video gaming had been quick to point to the antisocial behavior that gamers engaged in outside the arcade and suggested that gaming contributed to their delinquency. An article on efforts to curtail arcade openings in Lynbrook, New York, noted citizens' concerns:

The residents said that the centers, which feature games that challenge the player with electronic sounds and flashing lights, had become hangouts for noisy teen-agers who drink too much beer, leave garbage around and vandalize the property of nearby residents.²³

The games were also blamed for encouraging Lynbrook teens to "play hooky" from school, a concern echoed in other towns and communities that tried to limit the spread of arcades. In making the suggestion that arcades contributed to teenage delinquency, these communities attacked the arcades themselves. Concerns about the effect of video game arcades—that teenagers were minimally supervised, that they were spending their money on junk food and foolish games—reiterated concerns that had accompanied arcade culture for decades. John Kasson documented this anxiety about leisure and youth extensively in his writing on the history of Coney Island. The arcade's dubious history tied it to turn-of-the-century commercial amusements, among them amusement halls, movie theaters, and arcades—all of them too frequently filled with dirty pictures for the liking of many middle-class reformers, who took issue not only with the arcade's appeal to prurient interests but also with its enticement to shell out cash for frivolities away from hearth and home.²⁴

The courts ruled that the Mesquite ordinance, which restricted those under seventeen years of age from playing coin-operated video games without a parent or guardian present, was unconstitutional on grounds that video games should be protected as free speech.²⁵ The U.S. Supreme Court maintained that the ordinance violated both the First Amendment right to free speech and the due process clause of the Fourteenth Amendment. Although some of the Mesquite residents who initially complained about the games may have thought

that the games constituted some kind of incitement to violence, the Court did not show any willingness to consider them as such and has subsequently maintained a general refusal to curtail minors' access to violent materials. Further, the language frequently deployed in discussions of the Mesquite statute and similar measures taken by communities around the United States points to violence as only one factor in a more general concern about the "wasting" of valuable resources (time and money) encouraged by games. With this in mind, the intention of the original ordinance becomes clear. The restrictions on youth access to coin-operated video games were intended to force youths to use their time and money more wisely—in ways more in keeping with the values of older community members.

Although the suit ostensibly concerned the corporate entity of Aladdin's Castle, the Court was effectively siding not only with Aladdin's Castle, Inc. but also with the teenagers of Mesquite and of other cities and communities attempting to ban gamers. The court's ruling protected video games as free speech, but also protected the right of entertainment companies to sell their amusements to children and the rights of children to purchase media access without the intervention of parents or guardians. Given the generally marginal legal status of youths in the United States, this granting of rights, indirect as it may be, is still significant in its recognition of the rights of minors.

Further, the ruling nods not so subtly toward the late capitalist assertion that the freedom to consume is a fundamental civil liberty.²⁶ This represents a significant change from modernist conceptions of free speech, which were articulated through obscenity trials, including *Roth v. United States* in 1957, which focused on authors' rights to self-expression coupled with printers' and distributors' rights to propagate these materials, and the Berkeley-based Free Speech Movement, which insisted on students' rights to engage in political demonstrations on campus as a matter of intellectual and academic freedom.²⁷ While these types of speech acts persist and remain contentious in public discourse, discussions of free speech like the one in *City of Mesquite v. Aladdin's Castle, Inc.* do not focus on the issues of obscenity or intellectual or creative freedom that are at the root of these earlier, modernist arguments about the meaning of free speech. Instead, they focus on the right to sell and consume, often with little serious attention given to the materials' content. Subsequent

attempts to restrict distribution of games to minors based on violence have been rejected by the courts, which have refused to intervene, arguing that the research on the effects of violent materials on minors is at best inconclusive. The earliest attempts to curtail youth access to video games through the legal system failed largely because of the effectiveness of arguments tied directly to neoliberal arguments about the free market; this departure from older justifications of free speech becomes less surprising when placed in historical context.

THROWING AWAY QUARTERS IN A LABOR CRISIS

The early period of arcade gaming, between the successful launch of *Pong* in 1972 and the video game industry crash in 1983, coincides with substantial upheavals in the U.S. economy. Larger economic trends and crises drove micro-level economic decisions made by consumers. These include the oil crisis, the end of the international gold standard, and the decline of traditional communism. The Organization of Arab Petroleum Exporting Countries (OAPEC) launched an oil embargo in October 1973, followed in 1974 by a quadrupling of petroleum prices by OPEC (Organization of Petroleum Exporting Countries). These two incidents created a shortage of gasoline and heating oil during the winter of 1973–74 and sparked a broader energy crisis.²⁸ The U.S. withdrawal of troops from Vietnam also happened in 1973, and the rise of communist forces in Vietnam seemed for a time to herald a significant defeat for U.S. foreign policy and for American democracy as exportable good.²⁹ Nixon ended the convertibility of U.S. dollars to gold in 1971, a decision made in response to a recession coupled with significant inflation in the United States and multiple countries demanding that the United States “cash out” their dollars for gold as promised. This decision ended the Bretton Woods system, which had tied the international gold standard to the value of the U.S. dollar.³⁰

In particular, the elimination of the gold standard severed the tie between money and real, tangible goods, definitively abstracting capital. Consumers prove more willing and able to part with abstracted capital, a truth near universally acknowledged by anyone who has ever had a credit card. David Harvey points to two major changes in consumer culture: a “mobilization of fashion in mass (as opposed

to elite) markets [which] provided a means to accelerate the pace of consumption not only in clothing, ornament, and decoration but also across a wide swath of life-styles and recreational activities (leisure and sporting habits, pop music styles, video and children's games, and the like)," and "a shift away from the consumption of goods and into the consumption of services—not only personal, business, educational, and health services, but also into entertainments, spectacles, happenings, and distractions."³¹ Both trends shortened the lifetime of expenditures and accelerated spending, and enabled a move from an industrial, production-based economy to a service-based, consumer economy.

These shifts were not at all seamless; they triggered a great deal of instability affecting the day-to-day lives of workers and their families. The instability often took the shape of significant economic decline, as workers and communities that had depended on the profitability, stability, and growth of the industrial sector confronted layoffs and plant closures. The decade of the 1970s was marked by economic stagnation. The economist Ernest Mandel argues in *Late Capitalism* that the economic stagnation of the 1970s was inevitable, as the global economic boom of the preceding decades reached its limits.³² Profitability for U.S. companies had peaked in the 1960s before entering a steady state of decline and stagnation that lasted fifteen years. National economic growth dropped significantly: after maintaining an average of more than 4 percent annually for three decades, growth reached just 2.6 percent in 1969, then plummeted to -0.3 percent the following year. Growth stood at an average of just 2.87 percent through the 1970s. Simultaneously, the national inflation rate more than doubled, climbing to 5.3 percent in 1971 after averaging 2.5 percent annually through the 1950s and 1960s.³³

The recession hit manufacturing particularly hard, with massive layoffs in industrial plants that had previously served as the economic backbone for many communities. The postwar boom was decisively over. The labor historian Nelson Lichtenstein notes, "By the early 1980s, they [profits] were approximately one-third less than a generation before; in the manufacturing sector only about one-half." Although economic growth continued, the annual rate remained low, and real wages remained stagnant into the early 1990s. Furthermore, while wages were stagnant for most workers, young male workers

faced drops in real wages of 25 percent as the workforce expanded.³⁴ This economic upheaval has had particular implications for men, who increasingly, as summarized by Kimmel, “experience their masculinity less as providers and protectors, and more as consumers, as ‘ornaments.’”³⁵ The young men playing early coin-operated video games, then, were a population at a seemingly unprecedented level of economic risk, encountering decreases in their earning power and increases in unemployment while they were lured to consumption as a way to self-expression and satisfaction. The appeal of video gaming as a leisure activity may have eluded anxious moral guardians, but for many young people, particularly young men, the games presented not only an entrée into computer culture but an enticing leisure activity that offered opportunities for competition and recognition at a seeming remove from the economic realities that permeated work and family life.

The rise of the coin-operated video game industry coincided not only with a rapid increase in spending on entertainment services but also with a substantial spike in the demand for novel entertainments, which is intimately bound to the transition from modernity to postmodernity. Fredric Jameson pinpoints 1973, one year after the release of the first successful commercial video game, as the moment in which postmodernity and late capitalism emerged as dominant cultural and economic forms.³⁶ Based on the observations of Harvey and Jameson, gameplay’s circulation as a commodity in a postmodern, deindustrializing economy makes sense. The desirability of gameplay as commodified entertainment service was stimulated by the same shifts that made the financial expenditure required seem particularly risky to older community members. Shifts in the labor market heightened anxiety about the economic practices of the young, particularly young men who were facing limited job prospects and decreased earning power. Discussion of youths’ gaming practices point so frequently to the financial and time costs of the activity specifically because the economic pressures faced by many Americans would have led to increased worry about the industriousness and employability of these same youths. Video gaming may be just one among the “entertainments, spectacles, happenings, and distractions” that Harvey points to, but it would have been among the most decidedly novel, as it reflected not only the evolution of coin-op entertainment

technologies but the growing visibility of computer technologies. This novelty contributed to the high visibility of video gaming and contributed to its role as a lightning rod for those concerned with the values system that the nation's youths were absorbing.

FROM PINBALL TO POSTMODERNITY

Decades earlier at the height of the modernist age, the pinball machine fulfilled a similar cultural role. Pinball games first appeared as commercial, coin-operated amusements in the early 1930s, but the "golden age" of pinball did not come until the postwar period and its robust economic growth in the United States. Real wages doubled from 1947 to 1967, allowing many Americans access to unprecedented levels of economic stability and wealth.³⁷ The rise of pinball coincides with the expansion of Fordist production and consumption principles in the midcentury United States. This expansion fueled growth in manufacturing jobs and incomes while providing a burgeoning array of affordable consumer goods, from automobiles and appliances to clothing and furniture. Although Henry Ford had largely developed his principles in his own manufacturing much earlier—perhaps as early as his implementation of the eight-hour, five-dollar workday in 1914—Fordism as a broader set of practices did not gain traction until after World War II.

Shifts both in class relations and in regulatory practices combined with the decentralization of the population through suburban growth to enable a sharp turn toward Fordist production and consumption practices.³⁸ The postwar period also saw the cultivation of adolescence as an established developmental category. It was only during the Great Depression that, because of the lack of available work, most youths, particularly young men, attended high school. Thomas Hine places the "golden age" of teenagerdom as stretching from the twenty-five years before World War II to the beginning of the Vietnam War, when teenagers faced significant reductions in their economic security and cultural visibility.³⁹ Teenagers in the postwar period were significant consumers; pinball was, like video gaming later, a contentious way for teens to spend their time and money.

The golden age of pinball was marked by public disputes over the value of the games and by bans of the machines in cities like

New York and Los Angeles, where the games were judged to be a threat to the moral order.⁴⁰ Warren Susman argues that pinball was an amusement uniquely suited to the period's culture:

The pinball machine was the ideal toy of the machine age, with its spinning balls passing through a series of obstacle pins that meant points for the player if they met, although at the same time the injunction "Do Not Tilt" severely limited the player's opportunity to interfere with the chance movements of the balls.⁴¹

Susman's assessment of the pinball machine is that the notion of play it embodies is derivative of the age that produced it. The games played via these mechanized amusements serve a didactic purpose, instilling cultural values through physical and mental engagement with a device that is, at some fundamental level, a toy. The cultural values of the pinball machine reflect and teach the cultural values of the era during which they were most effectively produced for the broadest audience.

Playthings serve didactic purposes—classic toys like tea sets, model cars, and toy vacuum cleaners allow children to engage with the adult world, inviting them to mimic the tasks of older family members and familiarizing them with the sorts of actions that occupy adults. Most of these toys allow open-ended play. While most adults would assume that a five-year-old girl given a tea set could use the objects to stage a pretend tea service for her dolls or friends, or she could as easily stack the pieces into a tower, smash them against a wall, or otherwise play against the toy's intended purpose. Pinball machines, as Susman so distinctly describes them, do not readily allow for such play, as the games themselves limit the amount that a player may intervene in the game's outcome. The education that pinball games can provide is narrower and more tightly controlled than the learning experience that may be had with a set of crayons or a rubber ball.

Decades later, coin-operated video game machines demonstrate a similarly limited play principle at two levels—at the level of game-play permitted by the game's programmed rules and at the level of hardware tampering possible. First, at the level of the basic rules governing play, many early arcade video games are, as suggested by Juul, games of progression rather than emergence, which means that there

are real limitations on how the game may be played. Games of progression are those in which “challenges [are] presented serially by way of special-case rules.”⁴² These tend to have a single model of mastery, which is to say, there is a best, right way to play the game. A progressive game can usually be exhausted or beat more readily than emergent games. This is why Billy Mitchell can play a “perfect” game of *Pac-Man*. Games of emergence are those in which “rules [combine] to provide variation.”

While some classic arcade games, notably *Pong*, are essentially games of emergence, they still have significant structural limitations to play variance. For example, if someone in a two-player game of *Pong* simply refused to move his paddle, the game would end almost immediately—an outcome unlikely to be mutually desirable for the players at twenty-five cents a pop. So, even in the case of more emergent coin-operated video games, the game limits the potential for playing against the game’s set objectives, as many early video games will terminate if not played according to their objectives. Discussing the game *Zork* (a text-based game initially designed between 1977 and 1979 as *Zork*, then split into three games and released by Infocom in 1980; the first part is known as both *Zork I* and *Zork: The Great Underground Empire—Part I*, which was followed by *Zork II: The Wizard of Frobozz* and *Zork III: The Dungeon Master*), Terry Harpold summarizes this principle as “to behave badly is to play badly,” further pointing out that the game itself will not allow types of play that run counter to the game.⁴³ Like pinball machines, most video games were played in public amusement spaces and were owned by businesses, not by individuals who kept them in their homes. Physical alterations or technological tampering with machines was limited by this factor, and, further, arcade machines kept in homes were prestige commodities for serious players invested in preserving the integrity of the game and, by extension, the credibility of their game scores. The “world record culture” cultivated through the efforts of individual players and media outlets that granted significant attention to the “best” players raises this issue of an individual instance of gameplay’s credibility. Walter Day, the first video game referee, has said that part of the historical role of *Twin Galaxies* in serving as the arbitrating body of video game top scores was to develop rules of play based on notions of fairness and the perceived purpose of individual games.⁴⁴

In total, both form and ownership limit the types of play allowable, and these limitations are further enforced by cultural factors specific to the practices of competitive gaming.

These limitations serve several practical purposes. Most relevantly, they create a player perception of fairness in competition, and they also ensure that games end at regular, usually brief intervals, thus guaranteeing that the amount of play time purchased is relatively small and that those desiring to play for extended periods will continue to spend money. Most novice players would have confronted a situation not unlike the situation I faced in taking on *Galaga* for the first time, spending a good deal of money in an attempt not necessarily to master the game but simply to gain a firm enough understanding of the rules of engagement and the game's rhythms to play for longer than a minute or two. In the economy of the arcade, the most proficient players spend the least money, as their games can last for hours. Record-breaking bouts of gameplay, referred to as marathons, often exceed twenty-four hours. The ability to extract hours of gameplay from minimal financial expenditures is exceptional and is complicated by the fact that while it enables players to "beat the house" in a sense by keeping their money, they can do this only by following the rules of the game exceptionally well—and by pursuing a goal at odds with those of most arcade managers and venue operators. Tim McVey, the first person to score a billion points on a video game at Day's Twin Galaxies, in 1984, had several marathon sessions on *Nibbler* cut off by arcade employees. A common practice among arcade staff to force marathoning players off machines they were monopolizing was to simply cut the power supply to machines. The disruption of gameplay by a factor outside the player or the game is something that game designers could not have accounted for and is outside the rules system embedded in the game.

These types of disruptions circumvent the game's design, altering play in ways that are beyond the control of game designers. Within the controlled world of the game itself, Harpold's argument that "to behave badly is to play badly" helps illuminate the point that exceptional players are exceptionally well versed in the rules. They are the best adherents to the cultural, economic, and social standards of the arcade and of the games they play. While the impulse to beat the house may have put players at odds with machine operators'

perceptions of the games' economic purpose, players can beat the house in this way only by becoming exceptional gamers—usually through hours of play, many of which would have occurred before they became skilled at gaming. One principal lesson that the arcade teaches players is that there is only one way to play; even for games that can be played using various strategies, a player can sustain the game's length only by playing to the game's objectives. The better an individual plays by the rules, the more value he or she receives for his or her financial expenditure. The longer a player can play, the more points he or she can earn, and the more clout he or she has in the competitive social environment of the arcade. Superiority in gameplay is, like superiority demonstrated in other arenas, an opportunity to assert dominance and gain social clout. In both video games and pinball games, this superiority is accrued by an individual, not a team or other organized group. The money fed into an arcade game's coin slot is an investment. Players assume that they will receive for their money not only a chance to play but a chance to improve, and to become noteworthy, to have the skill required to play individual games that last for hours.

The adherence to rules that is necessary for competitive video gaming suggests in some ways that video gaming is fundamentally conservative in its implications. However, if video gaming is conservative, it is conservative only in this specific way, and only in some cases. Gamers' and game developers' shared obsession with technological advance and novelty, for example, puts gaming at odds with a conservatism that would seek to preserve classical notions of childhood or to resist technological change, even as the increased interest in canonical games offers an interesting counterexample. Further, the fetishization of individualized competition as the most valuable way of gaming has not precluded the development of collaborative games, nor has it precluded the development of lively communities around video gaming. Much of video gaming in the 1970s and 1980s put gaming and young gamers at odds with the values of moral guardians, which demonstrates gaming's disruptive potential. In particular, the high individualization of video gaming competition and skills appears to look forward to the rise of freelance and contract labor as a dominant mode of work.

On a surface level, the public debates about the social and cultural

value of arcade games frequently focused on anxieties about the “wasting” of money they encouraged. These arguments about the frivolous nature of entertainment spending were, as mentioned earlier, nothing new. Commercial amusements have always attracted controversy, as have media forms like the theater, the novel, and the Sony Walkman. However, the debates about arcade video gaming came at a critical transitional moment as the United States shifted from a modernist to a postmodernist economy. The teenagers who patronized arcades in the 1970s and 1980s were among the first to come of age in this new culture. They grew up in a culture not only filled with digital entertainments but shaped by a white-collar service economy, by a growing emphasis on computerization, and by the rising importance of consumer culture for self-expression and satisfaction. The discomfort that many adults felt at the prospect of teenagers spending hours and endless quarters in arcades doubtless seemed silly to the teenagers who patronized these amusement spaces. Indeed, in retrospect these concerns can often seem farcical, just another set of grumblings set off by generational differences that have caused conflict over everything from dress hems to novels to MP3 players and cell phones.

In the case of video gaming, the conflict develops at a point of massive cultural change and economic upheaval. At the back of the seemingly reactionary treatment of a new entertainment technology is a profound discomfort with radical shifts in the ordering of culture. When the Supreme Court finally ruled on the *City of Mesquite v. Aladdin's Castle, Inc.* in 1982, the Court found that the city's restrictions on arcade gaming were in violation not only of the Texas constitution but of the U.S. constitution as well.⁴⁵ Most immediately, the Court's decision hampered the ability of local and state governments to restrict gameplay by teens. More abstractly, the protection of video games as free speech and the assertion that children cannot be prevented from purchasing gameplay signals a moment in which consumption becomes protected speech. This protection of consumer practices as civil rights signals a shift to a stabilized consumer economy. Under this new model, freedom of choice often means freedom of purchase. The court decision eloquently expresses the implications of this model: individual identities come to be affixed to consumer products and practices, and disputes over the right to

buy—even for children, and even when couched in terms of moral concern—seem increasingly antiquated.

If access to the arcade provides access to emergent values and practices, then the issue becomes a question of not just who had access to a relatively expensive leisure activity but also who had access to the first wave of computerization, and consequently which children would be best prepared for the labor market in which they would come of age. Researchers like James Paul Gee, Elisabeth R. Hayes, and T. L. Taylor argue that, in this vein, the gendering of video games remains a critical issue in addressing the persistent underrepresentation of women in the tech and related industries, as the games provided youths with a point of access to computer technologies.⁴⁶ Access to these earliest video games, rudimentary as they may seem now, is no less important and, in fact, may carry greater importance because of the critical role this period played in shaping not only gaming culture but public perceptions of gaming and gamers. As video gaming became a major cultural force, it received significant media coverage in the popular press, which helped solidify notions of who was gaming and why. Dismissals of gaming as a frivolous leisure activity thus undermined the real lessons being learned by gamers and effectively short-circuited early discussion about why various demographic groups were not gaming and what effect limited or no access to gaming might have on a generation of workers whose labor market would be dominated by computerization.

Likewise, teenagers feeding quarters into *Galaga* and *Pong* were not only playing but learning the cultural and economic values that would allow them to survive and thrive in a deindustrializing work environment that would have seemed as foreign to their parents as the Fordist production lines and clanking pinball machines of the midcentury must have seemed to their grandparents. At an individual level, the coin-operated video games were a didactic introduction to these new practices, allowing the young to learn by doing and preparing them for participation in a new economy—first as consumers, and ultimately as citizens and laborers. The discomfort with which many parents and moral guardians greeted the rise of the arcade stems not from knee-jerk distrust of technology but from deep anxieties about the economic and cultural changes affecting American culture as a whole.

The video game arcade as it existed in its glory days has mutated for survival: it may now take the form of the entertainment complex as represented by venues in the style of Dave & Buster's; the "classic arcade" in which vintage machines are used to lure nostalgic Gen Xers; and hangouts for those who were or wish they had been there, such as Brooklyn's Barcade. In some ways, this afterlife represents games going back to where they came from, bars, where they had been advertised as novel amusements for adult consumers. But while the appeal of the games in 1972 would have been sheer newness, any novelty in the current incarnations is really the sheen of nostalgia, the allure of the vintage bits of popular culture. The games that at the time represented the encroachment of the new now represent instead the seeming simplicity of our recent past. Arcade machines remain one of the earliest broadly diffused forms of popular computing, and the boards that enabled *Space Invaders* and its ilk were the first computers many people had access to; the machines that now look quaint once looked flashy and new.

The arcade as considered here presents a compelling moment in cultural history, tied as it is to the novelty of the computer age, the growing compulsion to spend money on novel amusements, and the reshaping of the U.S. economy and labor market. To play in the arcade was to participate in emergent cultural practices; the discomfort that many adults felt watching children feed coin after coin into the flashing machines was a reaction to tangible evidence that children were being inducted into an era that operated on different value principles. The arcade was a training ground for different models of consumption, labor, and culture, and an emergent community of young men who subscribe to the values of this new era. Many Americans are living their adult lives by the rules of engagement they first encountered in strip mall amusement halls; the video game arcade provided players with an early introduction to these values, preparing them to serve as laborers in a technologically oriented white-collar service economy and to engage as investors/players in a heavily deregulated marketplace.

The broad diffusion of video games and their focus on young men as consumers made the games uniquely threatening. Moral reformers' discomfort with the hours that teens spent playing video games reflects uneasiness with the implications of these broader cultural and

economic shifts. Children were not growing up with negative moral values so much as they were being brought up as natives of the new economy; adults who had grown up in an era of company men, Fordist production, and savings accounts were watching the young grow up in an age of rapid-fire career changes, flexible accumulation, and easy credit. The intense competition of the arcade, filled with 8-bit violence and the enticement to spend this week's allowance and next week's all in one go, seemed decidedly unwholesome. The individual games of the arcade may have been simulations of sci-fi and cartoon scenarios, but the arcade itself was a simulation of those same generalized economic values we now confront as consumers, laborers, and citizens.