Selling Jennifer Aniston's Sweater: The Persistence of Shoppability in Framing Television's Future¹

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Abstract:

This paper contributes to historiography on new media in the United States by investigating the concept of “shoppability,” a capacity to purchase directly from advertisements and media content. With a focus on developments related to the cable television and telecommunications industry, the study demonstrates that the ambition of merging medium and marketplace has been part of a commercial logic framing technological and industrial continuity and change. Looking historically at efforts to engineer transactive television systems, we see how ways of imagining and talking about strategies for exploiting the marketing affordances of media convergence and digital technologies have shaped information and entertainment environments. The persistence and failures of shoppability are documented through analysis of cable’s expansion in the 1970s and 1980s, the development of digital set-top boxes in the 1990s, and ongoing t-commerce initiatives.³

Keywords: Cable, Television, Technology, Convergence, Historiography

Expectations about the commercial potential of new technologies have been imprinted in the policies, practices, and apparatus that make up industrial media systems. In the United States, the structuring influence of government and business institutions shaped the emergence of telegraphy, telephony, and broadcasting as instruments of control and coordination for an expanding market order.⁴ By the end of the 1940s, the integration of advertiser-supported television into a consumer economy was well underway,⁵ and over the next dozen years, the plan to sell national, live audiences to mass marketers

was built into TV's distribution infrastructure and institutional makeup.⁶ Before long, forward-looking entrepreneurs endeavored to capitalize on the capacity of broadband wires and solid-state electronics to enable data-rich, two-way transmission through television.⁷ Prospects for mediated commerce excited imaginations as the use of integrated circuits portended a convergence of television, computing, and telecommunications.⁸ Vestiges of this "blue sky" forecasting about interactive TV remain operative in advertising and media industries. Following Patrick Parsons's directive to examine the "hopes people have for technology,"⁹ this study analyzes the persistence of one prominent theme in discussions about the future of video entertainment: *shoppability*. Examining this theme historically through discourses in and about television, advertising, electronics, and information technology industries, we see how certain ideas about television's potential, reflecting long-standing ambitions, shaped the digital media environment.

"Shoppability" is a recent term of art in media industries, but the concept it captures—that items featured in advertisements and entertainment are available for immediate purchase—has surfaced throughout the history of commercial broadcasting. Pressures to connect advertising with sales and to exploit the marketing capacities of new media have motivated many attempts at engineering interactive and, more specifically, *trans-active* television systems. This paper examines efforts to imagine and implement the technological capability for viewers to use their remote controls to buy the things they see when watching video content or accessing interactive applications through a TV set-top box (STB). The focus, in other words, is on the convergence of *marketing communication* and *marketplace infrastructure* within a single user touchpoint oriented around the entertainment services provided by cable companies and other multichannel video programming distributors (MVPDs) in the United States. Although shoppable applications have proliferated across internet-enabled devices, my preoccupation here is with forms of transactivity built into cable systems, STBs, and, to a lesser extent, other "connected" technologies used for viewing television content—especially advertiser-supported material.

To probe this marriage of entertainment and merchandising, the paper dwells on an influential way of thinking about selling wardrobes and furnishings from narrative television programming, as well as the related goal of combining features of direct marketing and television advertising.¹⁰ In this vision's fullest expression, viewers could click their remotes to purchase almost anything appearing in or related to programs and advertisements. MVPDs would bill customers and share in the sales revenue, along with intermediaries managing software, order processing, and product licensing. This strategy has been distilled in a deceptively inane slogan: "selling Jennifer Aniston's sweater." Although not the whole of shoppable media, this instantiation of shoppability on multichannel television in the United States is suggestive of a broader pattern of ubiquitous connectivity to electronic marketplaces, and it provides insights about how technological change relates to industrial discourses and paradigms. Analysis of trade-press articles, professional gatherings, and other industry sources supports the argument that shoppability has been a persistent theme in framing the future of television and broadband services. This history invites us to consider how marketing strategies shape not only media texts but also the infrastructures and platforms that set

conditions of possibility for programming, applications, and user engagement. Even failed ambitions can exert lasting influence on a media system's development.¹¹

Shoppability as Affordance: Imagination, Potential, Strategy, Discourse

Shoppable television of the type introduced above has been plagued by technical challenges, prohibitive costs, uninterested consumers, and ongoing cycles of hype and disappointment. Because of technological advantages, cultural differences, and less entrenched institutional and infrastructural legacies, internet-based platforms and devices have been far superior to linear television as venues for presenting end users with shoppable entertainment and advertising. Uses of Internet Protocol (IP) for distributing premium video and enabling long-imagined forms of interactivity are part of a restructuring of roles, relationships, and commercial possibilities within media industries. But to understand the conditions that provided for a deepening entanglement of entertainment and electronic commerce, which is often regarded as a *consequence* of digitalization,¹² we must take a longer journey through broadcasting and cable television.

In this spirit, I suggest that shoppability be regarded not just as a functionality but as an imagined affordance¹³—a commercial and technological *potential* that actors perceived, and tried to activate, in the convergence of television, computing, and telecommunications. Shoppability has been part of a story about *possibilities*; it is a way of imagining and taking advantage of what a set of sociotechnical resources can enable. The story has been revised strategically to meet challenges and opportunities, but its iterations cohere around hopeful visions of a transactive media future. The gradual and messy development of digital infrastructures for televisual systems has been framed by expectations about tantalizing prospects, including shoppable advertising and entertainment. Movement toward these infrastructures and the associated changes in how people access and engage with content and platforms have further catalyzed belief in shoppable TV as an imminent technological horizon, even as vast parts of the landscape have shifted. With these shifts, the commitment to shoppability has become a strategic *defensive* necessity. As online and mobile media have been built into formidable marketing technologies, the television industry has faced pressure to match its digital rivals' capacities for behavioral ad targeting, data collection and analytics, and transactivity, as well as to synchronize with “omnichannel” advertising and retailing plans.

From this perspective, shoppability belongs to the history of cable television as a “new medium,” which covers not only the introduction of community antenna television but also the ongoing redefinition of wired communications services within a broader ecology and political economy of media. Throughout this history, we observe that how industry participants and observers understand and talk about what those industries do—or are trying to do—is of considerable significance to technological continuity and change.¹⁴ When technologies are “new,” and their meanings and prospects are uncertain, expectations and promises made about technological trajectories can have profound, if

unpredictable, consequences.¹⁵ Stakeholders therefore leverage assets and opportunities toward establishing legitimacy for visions of development that favor their interests.¹⁶ As Tarleton Gillespie notes, firms and industries mobilize discursive strategies to “frame their services and technologies” in ways that help them pursue business objectives, secure regulatory privileges and protections, and “lay out a cultural imaginary within which their service makes sense.”¹⁷ As industries that are capital-intensive, structured by government policy, and articulated to financial speculation, cable and telecommunications are thoroughly interpenetrated with visions about the future of technology. A discourse centered around a set of complementary affordances, including *shoppability*, *addressability* (targeting), and *accountability* (data-driven efficiency), intensified during the development of cable television, reflecting shifting marketing strategies and cable operators’ competitive advantage of controlling a high-capacity, (potentially) two-way connection into an individual home. Through this discourse, cable-delivered video and data services were *made to mean* in ways that reflected and refracted the hopes of various constituencies. As aspirational waypoints that oriented ambitions and expectations about the commercial potential of media convergence, the discursively constructed affordances of shoppable television have influenced developments in the technical and administrative configurations that structure our information and entertainment environments.

Some of the source material supporting this argument has been examined in research addressing the history and possible futures of television,¹⁸ but a sustained focus on shoppability has not been pursued. This paper identifies early examples of this marketing logic, traces its contributions to the building of cable systems, demonstrates its continued salience for digital media, and then considers why the idea of shoppable television has survived decades of disappointment. Tracing the history of these strategies provides clues about how our communications systems have been shaped by the commitment of attention, imagination, energy, and capital toward developing shoppable media. At least three insights emerge: (1) the discursive construction of shoppability as an affordance of media convergence influenced the financing, building, and regulation of broadband infrastructure and digital video and marketing technologies; (2) strategies for using interactive television for targeted advertising, merchandising, and market research were midwives for a commercialized internet; and (3) industrial boundaries, loyalties, and institutions have interesting, if uncertain, effects on how technologies are imagined, developed, and deployed. For a launchpad and a recurring point of contact, we look to one shoppable scheme that stands out as a powerful expression of marketers’ dreams.

Industrial Logic and Lore

An Interactive Storefront

Generally, in the United States, advertising and marketing have been prominent among the ambitions of stakeholders engineering television’s technologies and cultural forms.¹⁹ As Jonathan Gray puts it, “a commercial television industry is guided first and foremost by the desire to sell all manner of consumer goods and services.”²⁰ New initiatives have proceeded along this logic. By the mid-1970s, Raymond Williams recognized that, within a

commercial model of television, interactivity would tend to be exploited for its marketing affordances. Despite the technical capacity to facilitate civic participation, Williams worried that two-way television, in its historical-institutional configuration, would confront “reactive consumers” with narrow prospects, such as “choosing an item from a shop display or from an advertisement.”²¹ After more than two decades of failures to establish a viable interactive television business, stakeholders in the 1990s seized on advances in technology and marketing strategy. Their maneuverings continue to validate Williams’s appraisal.

In his bestselling book, *The Road Ahead* (1995), Bill Gates envisioned TV as an interactive catalogue from which viewers could buy anything appearing on-screen.²² Within three years, computer programmers at MIT’s Media Lab—one of whom was later put in charge of “direct-to-consumer retailing via iTV” at NBCUniversal—had designed a prototype for such interactive shopping, called HyperSoap.²³ As Gates captured the imaginations of technologists and entrepreneurs, an analyst at an influential consultancy curried favor with marketers. In 2000, Josh Bernoff of Forrester Research predicted that television would embrace HyperSoap-style platforms “in which viewers can buy every item the actors are wearing or using.”²⁴ HyperSoap’s name and format seemed to betray a gendered assumption that soap operas, as well as scripted sitcoms and dramas, would be felicitous venues for selling jewelry and apparel to female viewers emotionally invested in characters and storylines.²⁵ Attaching an alluring personality to the idea, Bernoff planted a seed that continues to attract fertilizer: viewers could buy Jennifer Aniston’s sweater.²⁶

Selling the *Friends* star’s sweater became a trope in industry parlance, setting an aspirational benchmark for interactive TV. Writers in the trade press continue to invoke it as a threshold marking the dawn of entertainment-based e-commerce.²⁷ The idea is still summoned—sometimes pejoratively—at industry meetings.²⁸ The proposition has even been acknowledged by academic researchers testing new advertising models.²⁹ Although the plan to sell Jennifer Aniston’s sweater has disappointed expectations and been disavowed by its original proponent,³⁰ many marketers and analysts remain possessed of the idea that television should be a storefront for showcasing and selling merchandise associated with programming or ads.³¹ In this conviction, contemporary marketers preserve and extend a long-standing ambition underlying commercial media systems. As a recent observer puts it, “The idea of being able to cash in viewer demand for, say, the sweater Jennifer Aniston was wearing in *Friends* has been around longer than *Friends*.”³²

The Long History of Shoppability

Commercial broadcasting in the United States has always been wedded, in some way, to marketing. National advertisers, recognizing radio’s potential as a “major selling medium,” produced some of the earliest programs as venues for introducing homemakers to branded domestic products.³³ Merchants—department stores, especially—were among the first to establish commercial broadcast stations,³⁴ and some retailers promoted their inventories by broadcasting from their shop floors. One store reported that “listeners at home come in to see the things of which [host] Enid Bur has spoken, with the desire to buy

already created.”³⁵ As early as 1944, Macy’s brought this concept to television, scheduling *Tele-Shopping with Martha Manning* (later renamed *Macy’s Teleshopping*) on DuMont’s WABD New York.³⁶ Over the next two years, Gimbels in Philadelphia and Kaufmann’s in Pittsburgh commissioned short television productions, for in-store exhibition, to showcase merchandise such as women’s apparel.³⁷ By 1949, WTAG Worcester described its product integration strategy as “Sell-A-Vision,” bragging that one sponsor “sold out its supply [of scented wrapping paper] in a matter of hours” after a broadcast.³⁸ These ventures advanced the idea that what appears on-screen is for sale, but the radiated flow of linear broadcasting did not allow for purchasing, and “intra-store” television reached only viewers already in the store. The construction of cable television would amplify ambitions to make the medium itself into a marketplace.

In the late 1940s, community antenna TV operations began distributing television signals by cable. Within two decades, entrepreneurs, analysts, and policymakers apprehended the prospect of delivering multiple services over an integrated wire infrastructure.³⁹ Enthusiasts predicted sweeping changes in the production and consumption of information and entertainment, culminating in a “wired nation” wherein cable would accommodate a host of services, including news delivery, telephony, and home shopping.⁴⁰ A 1966 article in *U.S. News & World Report* anticipated Raymond Williams’s aforementioned assessment, suggesting that “Merchants will use extra channels to display their wares more fully than they can on the usual spot commercial.” A “housewife,” the article continued, can “select a dress from the television screen, electronically place her order for the dress, and direct her bank to make the payment.”⁴¹ Two years later, much fanfare accompanied a demonstration of two-way functionality at the National Cable Television Association’s (NCTA) annual convention.⁴²

By the 1970s, the Federal Communications Commission (FCC) proposed new rules permitting cable operators to import distant signals into the hundred largest US markets, contingent on some stipulations, including a requirement that new systems build two-way capacity into their plant.⁴³ These proposals spurred considerable prospecting.⁴⁴ Perceiving limited demand for services that merely conveyed broadcasters’ outputs, analysts suggested that to penetrate large urban markets, and “[r]ealize the full potential of cable,” operators would need to offer interactive features that exploited the technology’s varied capacities, among which electronic shopping was consistently listed.⁴⁵ At the 1971 NCTA convention, Dean Burch, chairman of the FCC, warned cable operators that they could expect regulatory disfavor if they did not augment their importation and retransmission functions by offering innovative services and experimenting with “such two-way operations as shopping from the home.”⁴⁶

In 1971, a report from Rand Corporation admitted that remote shopping was “technically feasible” but not yet economically viable.⁴⁷ Acknowledging that “Remote shopping would be attractive to advertisers eager to stimulate impulse buying,” the report’s author doubted that subscribers would share marketers’ enthusiasm for these services.⁴⁸ Notwithstanding this caveat, the promise of interacting with consumers through the television urged substantial investments and shaped the development of cable in the United States.

Industrial Prospecting and Predicaments

Building a Business

After two-way functionality was demonstrated at the 1968 NCTA Convention, stakeholders asserted their visions for an interactive television business. Already by 1970, Teleprompter Inc., the largest multiple system operator (MSO) at the time, recognized itself as a “broad-band communications company.” Similarly, the vice president of Cox Cable urged the industry to exploit television’s “unused capacity” by deploying shopping services and other applications.⁴⁹ Teleprompter’s president saw two-way services as a beachhead for cable operators to establish themselves in the data-transport and market research businesses, and he acknowledged “a tremendous opportunity for merchandising of goods.”⁵⁰ This “opportunity” soon became part of the cable industry’s value proposition. In negotiating a franchise agreement with New York City, Teleprompter touted its development of “arm-chair shopping.”⁵¹ The next year, Telecable Inc. tested a home shopping application in Kansas City, featuring live presentations from a Sears, Roebuck store and using an advanced home terminal to let “the housewife . . . make choices on the spot by punching the appropriate buttons.”⁵² In 1973, Theta Cable and American Television & Communications tested interactive services, including shopping, in California and Florida, respectively.⁵³ Warner Cable launched its pathbreaking QUBE system in 1977. Among other two-way features, QUBE enabled users to “order merchandise displayed on the screen, and even pay for it—by punching out credit card number and other required information.”⁵⁴ In 1979, a former NCTA president started a cable company to realize “the medium’s unfulfilled technological promises,” using interactive services, such as shopping, to expedite cable’s maturation as a general information infrastructure.⁵⁵ Cox Cable followed suit by the early 1980s, designing INDAX, a two-way data exchange system that facilitated banking and shopping. Although these services were costly and slow to materialize,⁵⁶ futuristic promises became strategic resources for cable operators.

Interactive applications, with home shopping consistently listed among them, were bargaining chips in pivotal franchise negotiations during cable’s urban expansion in the 1970s and 1980s. According to L.J. Davis, “Nothing, absolutely nothing, won the hearts and minds of the targeted cities like interactive television.”⁵⁷ QUBE helped Warner Cable acquire franchises in several large markets, including Cincinnati, Dallas, Milwaukee, Pittsburgh, and Houston. Reporters identified INDAX as a decisive factor in Cox’s winning bids in Omaha and New Orleans.⁵⁸ Mile Hi Cablevision secured a franchise in Denver with a proposal that included “full interactive services, including home security, shopping, and banking.”⁵⁹ And all six bidders for five franchise areas in Chicago promised interactive services, such as home shopping.⁶⁰ Within just a few years, however, most cable prospecting proved to be more fanciful than feasible, with “beleaguered operators . . . trying to get out of agreements to provide extravagant services and facilities.”⁶¹ Watching cable companies postpone or abandon the interactive offerings touted during franchise negotiations, critics alleged that the “main purpose” of interactivity was bargaining leverage.⁶²

Interactive ambitions thus helped to draw the map of cable service in the country, both by influencing franchising decisions that granted lasting incumbencies and by creating

conditions for opportunistic MSOs to expand by absorbing overextended operations. Well-publicized misfires helped rein in speculation, and as the industry found its footing with satellite interconnection and a national policy set by Congress in 1984, cable became a reliable investment even without resorting to exotic imaginations. But by the end of the 1980s, a movement by telephone companies to market television services renewed shoppability's salience in the narrative of media convergence and its currency as a strategic asset in systems building.⁶³ Following legal victories and favorable rulemaking, in which their lobbyists used the promise of interactive services to justify "deregulation," telephone companies announced plans to build video distribution systems. While considered, by some, a ruse by the regional Bell operating companies (RBOCs) to gain entry into the long-distance telephone market, these designs were elaborate, costly, and consequential.⁶⁴

GTE, the largest independent operator (which became Verizon after its acquisition by Bell Atlantic), began testing a home shopping portal, called Main Street, in several markets in 1988 and then embarked on a plan to construct a fiber optic-coax infrastructure for interactive services in California.⁶⁵ By 1994, GTE had deployed Main Street near Boston and anticipated up to seven million new customers for its interactive products over the next decade.⁶⁶ Ameritech won franchises throughout the Midwest and earmarked US\$29 billion over fifteen years to build hybrid fiber-coax systems capable of supporting interactive shopping.⁶⁷ As US West, Inc. developed an "interactive mall" showcasing merchandise from Virgin Records, Nordstrom, J. C. Penney, and Ford, the executive vice president of the venture distinguished it from traditional home shopping: "We are creating short-term television with an impact, and it is important to remember we're in the business of direct marketing." The company's plan for "combin[ing] entertainment and electronic retailing" envisioned a future in which digital marketplaces would learn, predict, and cater recommendations to users' viewing and shopping habits.⁶⁸ Meanwhile, *Variety* called Bell Atlantic "the most aggressive" entrant into television among the RBOCs, with its "Stargazer" system.⁶⁹ The company planned to spend US\$15 billion by 2000 to equip 8.75 million homes with five "killer applications," including home shopping and direct-response advertising.⁷⁰ Larry Ellison, CEO of Oracle, the database software firm managing Bell Atlantic's system, animated his vision in terms of frictionless impulse buying: "You're sitting there watching the ABC News, an ad from Time Life comes on and suddenly you've got an opportunity to order the entire works of Nat King Cole on CD. One click of the button and it's yours."⁷¹

Although these ventures ended mostly in retreat from video provision, in the discourses about them we see vivid impressions of the modern internet, including high-capacity servers that store digital video for on-demand retrieval, easily navigable retail portals, click-to-buy shopping, dataveillance, and behavioral ad targeting. The efforts by telecoms to provide converged information and entertainment services, in which long-standing dreams of interactive television were routinely evoked, influenced the building, financing, administration, and regulation of America's information infrastructure.

To outdo telephone companies, exert a competitive advantage against fledgling direct broadcast satellite (DBS) businesses, and search for new billable services to skirt rate regulations imposed in 1992, cable MSOs invested billions in plant upgrades and plotted adventurous schemes. In 1993, Time Warner announced ambitious plans for its Full Service Network (FSN).

Initiated in Orlando, FSN let viewers use the television to order from Pizza Hut and purchase from an “interactive digital shopping mall.”⁷² At the same time, in Omaha, Cox Cable implemented a large-scale test of an interactive offering that included home shopping.⁷³ Although these experiments inflicted financial wounds and exposed the gulf between rhetorical hype and the actual condition of existing infrastructures, Microsoft’s US\$1 billion investment in Comcast in 1997 signaled that Bill Gates expected cable operators to build the interactive video systems he had imagined in *The Road Ahead*. *Broadcasting & Cable* regarded Gates’s financial blessing as visionary: “In the past 12 months, maybe in the history of cable, no other single event has done more to highlight the industry’s potential and endorse its technology.”⁷⁴ The billionaire who hoped television could become a shoppable catalogue helped position cable at the heart of the US internet industry.⁷⁵

Even earlier, Microsoft had dedicated resources toward designing “software and network facilities for interactive television,” in partnership with Tele-Communications Inc. (TCI), the nation’s largest MSO for most of the 1980s and 1990s.⁷⁶ Although TCI’s dominance owed more to corporate maneuvering than technical sophistication, the company’s CEO is said to have “single-handedly launched the start of the interactive age.”⁷⁷ In 1992, John Malone announced his intention to provide customers 500 channels and advanced information services, “and for the next couple of years, the cable industry spun interactive dreams, visions of videos ordered at a whim, electronic shopping, instant-response advertising, and paying bills with the click of a button.”⁷⁸ In trade-press coverage of TCI’s digital cable offering, we find affordances and expectations that had been discursively constructed decades earlier continuing to frame the future of entertainment and information services:

It is simultaneously a step back to the much-ballyhooed interactive TV and a leap forward into the world of digital bits . . . Digital cable represents the beginning of the cable industry’s ability to exploit the full power of its bandwidth by opening up the coaxial pipeline to any kind of traffic . . . Moreover, that traffic can travel in both ways, easing the way for faster impulse buys, interactive games and Web-like features.⁷⁹

Still, despite Malone’s rhetoric, enthusiasm outpaced the translation of these ambitions into reality. One major bottleneck was the electronic equipment for bringing a digital revolution into customers’ homes.

Building a Better Box

Providing shoppable services required upgrades to “next-generation” set-top boxes. STBs emerged in the late 1960s as converters that enabled TV sets to receive cable transmissions. They became important instruments of control when subscription channels, tiered services, and pay-per-view offerings required cable operators to scramble signals and discriminate among customers, using “addressable” systems controlled by computers at the operators’ headend facilities. By the early 1970s, the cable industry recognized home terminal equipment as the means for furnishing interactive services, such as “point-to-point merchandising,” and venture capitalists began to exhibit a conspicuous interest in cable hardware.⁸⁰ Anticipation of the possibilities presented by addressable and two-way-capable STBs

continued to simmer for the next two decades,⁸¹ before boiling in the 1990s, when advances in digital technologies seemed to promise the arrival of a long-awaited interactive future.

STB installations responded to what historian Thomas Hughes calls a “reverse salient”—a weakness or imbalance among components that prevents a sociotechnical system from operating at full capacity.⁸² STBs balanced the receiving capacity of TV sets with the transmission capacity of coaxial cable, and later their addressable function capitalized on the revenue potential of subscription content by limiting unauthorized access. Beyond activating the transmission and control capacities of cable systems, connecting “smarter” devices at the edge of the network expanded the range of plausible innovations and revenue streams. Investing more than US\$20 billion in plant and equipment throughout the 1980s,⁸³ the cable industry built an infrastructure with “excess capacity,” suitable for much more than retransmitting broadcast and satellite-delivered signals. Shoppability and “impulse pay-per-view” presented strategies for capitalizing on this capacity.⁸⁴ Describing his company’s future in 1982, the CEO of Time Inc.’s American Television & Communications, then the largest MSO in the country, planned both to extract more revenues from “capital assets already in place” and to install “home terminals that are more sophisticated and that will allow you to deliver more services, and thereby [get] more revenues.”⁸⁵ The potential for interactive direct marketing seemed to promise revolutionary change.⁸⁶ Despite nagging doubts about viewers’ appetites for dramatically new TV experiences, outfitting STBs with microprocessors and internet modems to support a suite of multimedia and marketing services was part of long-term strategies for leading actors in cable, software, and electronics industries. It was also a priority for the FCC following the 1996 Telecommunications Act.⁸⁷

The STB, which was being redesigned to materialize the hopes of an interactive future, became a locus for the collision of television and networked personal computing. As an article in *Broadcasting & Cable* put it, “the set-top box is a nexus where different technologies can come together and generate new revenue.”⁸⁸ The 1990s witnessed a flurry of activity revolving around STBs, which many people at the time expected to be the main consumer gateway to an “information superhighway.”⁸⁹ Broadcasters, marketers, and MVPDs invested in hardware and software to support shoppable applications. The ranks of companies designing and manufacturing apparatus for multichannel television—led by General Instrument and Scientific Atlanta—swelled to include giants from the computer industry, notably Microsoft, Intel, IBM, Apple, and Hewlett-Packard. These firms coded and built digital STB technologies for cable, DBS, and telecom operators who requested electronic shopping and other interactive capabilities.⁹⁰ Tech startups rushed to design shoppable applications; for example, Wink Communications, an early standout in television commerce, enabled viewers to click their remotes to buy CDs from musical guests on *The Tonight Show with Jay Leno*.⁹¹ Collectively, these efforts were, as the title of one consulting report put it, “Turning TV Sets into Cash Registers.”⁹²

To some, these developments heralded “a whole new phase of the cable and computer industries,” positioning television companies to tap “the home retail market, which may be worth hundreds of billions of dollars every year.”⁹³ TCI’s executive vice president of ad sales suggested that advertising within the “direct-response environment” enabled by digital, addressable STBs constituted “a whole new way of using television.”⁹⁴ By the late 1990s, the perceived affordances of digital cable systems—to monitor viewing habits, execute behavioral profiling

and targeting, evaluate the effectiveness of ads, and facilitate immediate purchases—had aroused considerable excitement: “The broadband pipe is primed and advertisers are pumped up about the prospects of translating the PC ‘click through’ to the TV.”⁹⁵

Analysts responded to the commercial and technical convergence of television and personal computing with predictions of robust growth for interactive TV. One study projected interactive television shopping revenues to total US\$4.3 billion in 2005, with “the bulk of this buying” executed directly with a remote control.⁹⁶ Other estimates were even grander.⁹⁷ But these predictions were too optimistic. To begin, building a digital STB to actualize the dreams publicized by cable operators was difficult and expensive.⁹⁸ For years, General Instrument struggled to produce a box that matched John Malone’s vision, and the set-top terminal running Time Warner’s FSN reportedly cost US\$7,000.⁹⁹ One observer joked that Time Warner could have saved money on FSN’s pizza-ordering function by hiring someone to stand beside each subscriber’s TV and wait for the viewer to request a pie.¹⁰⁰ Even in more modest systems planned in the mid-1990s, the price tag for next-generation STBs (US\$400–US\$1,000) was well above the perceived threshold of viability (US\$200–US\$300).¹⁰¹ Activating the capacity implied by digital STBs also required outlays for home installations and upgrades to head-end facilities, and cable operators were reluctant to replace equipment for which expenses were still being amortized over expected life spans. Even for MSOs with enough scale and cash flow to absorb these expenditures, the process was complicated by the patchwork nature of their footprints, which they had built by acquiring local cable systems whose facilities ranged widely in age, quality, and compatibility. These pressures, in a context of chaos and uncertainty, depressed STB order volumes, kept manufacturing costs high, and discouraged enterprises that required mass-scale deployment of digital equipment.

Furthermore, as an infrastructural technology, STBs are entangled with actors, institutions, and interests across industries and sectors. While shoppable television excited imaginations, STBs are essentially designed to control access to video content. Building an interactive storefront held an outsized place in expectant discourses about the future of entertainment compared to more pressing concerns, such as program licensing, signal security, and digital video standards. Futuristic services sounded good in the press, but filling the bandwidth unleashed by digital compression with more programming was a safer bet for cable operators. Moreover, the coordination needed to stabilize a network of interoperable devices and protocols that could support the elaboration of shoppable television in ways that would appeal to the national marketers needed to finance these expensive ventures was undermined by proprietary dispositions among system operators, equipment makers, and software developers.¹⁰² Beyond the “chicken and egg” problem of deployment and investment, the tensions involved in building and exploiting industrial capacity were aggravated by conflict between the conservative influence of fixed capital—that a rigid infrastructure would frame the limits of innovation—and a climate of rapid technological and cultural change—wherein an STB might be outdated by the time it was installed.

Consumers, meanwhile, encountered frustrating interfaces, unfamiliar behaviors, and a dearth of appealing interactive content. For their part, advertisers and marketers continued to face a promising but largely incoherent technical and administrative environment. Although technologies existed to facilitate shoppable television, the affordances had not been manifested in industrial process or cultural habit. Ongoing struggles suggest that the

assessment of one cable executive remains topical twenty years later: “Sometimes the dreamers dream faster than the implementers.”¹⁰³

Despite disappointing expectations, shoppability has remained a resilient part of discourses about the future of television and digital media. We now return to perhaps the most potent narrative frame for imagining the merchandising potential of interactive video entertainment, which carries the story of shoppability to the present.

The Acme of Shoppable Media

In 2000, Josh Bernoff forecast that by 2003 most cable and satellite operators would provide sophisticated STBs that let viewers buy the products they see on TV. Bernoff touted the prospect that viewers could purchase Jennifer Aniston’s sweater while watching *Friends*, but this was only one among his many prescriptions for refining the television business, most of which have been much more successful than “t-commerce.” Bernoff even elaborated problems with selling wardrobe items. For example, how to share revenues among the merchant, the t-commerce service provider, the broadcast network, the affiliate station, the MVPD, the show’s producers, and the actor herself remained unresolved. As skeptical observers perceived, with “too many fingers in the t-commerce pie . . . the economics of Jennifer’s sweater quickly unravel.”¹⁰⁴ “Selling Jennifer Aniston’s sweater is not a business model,” one critic opined.¹⁰⁵ Another doubter called the idea “pure rubbish,” adding, “I don’t think anyone will want to watch *Friends* to buy a sweater.”¹⁰⁶ Bernoff soon admitted that “T-commerce expectations have been way overblown.”¹⁰⁷ Nevertheless, Jennifer Aniston’s sweater became a touchstone for television’s future—and its failures. A 2008 article in the *New York Times* called “Rachel’s sweater” a “catchphrase . . . for what devotees of interactive television are trying to accomplish.”¹⁰⁸ It was “Blue Skies” for a digital age.

The potential to enable impulse buying—reducing to a minimum the steps between introducing and consummating a purchase opportunity—was recognized by the 1970s and was a motivating factor in designing systems that could support impulse pay-per-view. The vision of shoppability articulated by Gates and Bernoff seems to further captivate imaginations, perhaps aided by television’s history as a showcase for attractive goods, services, and lifestyles. While, in one breath, dismissing “dreamers” who had “glommed onto the constant hype about interactive TV’s ability to let viewers buy anything they see on the tube,” a journalist used the next breath to convey a forecast of US\$14 billion in t-commerce sales by 2012.¹⁰⁹ In 2005, *USA Today* imagined a prosperous future for contextual shoppability in cable programming: “Talk about impulse buying. You’re watching your favorite cable channel and admire a product on the show. With a few clicks on your TV remote, it’s yours.”¹¹⁰ An executive from a media buying agency depicted the convergence of television and internet video through this lens, describing a scenario in which viewers “mouse over . . . and click” on Aniston’s sweater.¹¹¹

Enthusiasm swelled as digital STBs were installed in thirty-eight million cable homes by 2008, and interactive television, according to a Cablevision executive, was no longer the “wave of the future,” but rather “the wave of now.”¹¹² That year, a consortium of the six largest cable operators in the United States directed their resources and clout toward

establishing technical and administrative standards for making interactive TV work at the scale required to entice national marketers. Even as the consortium tried to distance itself from false promises woven into Aniston's sweater, its CEO counted t-commerce among the "four flavors" of interactivity it intended to develop.¹¹³ By 2009, the *New York Times* observed that "cable companies are starting to move" slowly toward "the promise that consumers could instantly buy Jennifer Aniston's sweater on 'Friends'."¹¹⁴ In 2012, the consortium abandoned its t-commerce venture and dismissed 80 percent of its staff.

A decade after critics eulogized the plan, selling Jennifer Aniston's sweater remains a tantalizing symbol for a still-nascent technology.¹¹⁵ More current references have been proposed, such as Serena's handbag from *Gossip Girl* (2007–12), Sarah Palin's red jacket from *Sarah Palin's Alaska* (2010–11), and Effie Trinket's wig from *The Hunger Games* (2012).¹¹⁶ But however personified, the logic remains intact. This imagery has been inherited to describe initiatives that let TV viewers use "second screen" devices to buy products related to the programs and advertisements they watch.¹¹⁷ As more TV viewing occurs within reach of internet-enabled devices, advertisers, programmers, and MVPDs are leveraging second-screen connectivity to "turn any network, app, multichannel provider and TV set into a kind of home shopping network."¹¹⁸ As early as 2006, Delivery Agent, an e-commerce company, began operating an online "tour" that turned the *Desperate Housewives* (2004–12) set into a shoppable showroom.¹¹⁹ More recently, Shazam, a mobile application designed for music discovery, has been engineered to "reinvent the 30-second spot" by allowing "viewers to buy products from mobile devices."¹²⁰ And in 2016, A+E Networks produced "the first 'fully-shoppable' TV series," in which every item featured on the home improvement show can be purchased from Wayfair.com.¹²¹

Although these and other developments blur the lines of "television commerce," as they operate through equipment and services provided by someone besides the MVPDs (though they typically depend on the latter for internet connectivity), they contribute to the broader project of making video entertainment shoppable. Indeed, increased connectivity to digital marketplaces has helped sustain hopes that selling merchandise directly through television devices is finally becoming mainstream, especially as firms with core competencies in electronic retailing have assumed larger roles in video distribution (e.g., Amazon).¹²² "Click-to-buy" functions appeared on TiVo in 2008 and on Apple TV and Roku devices soon after. Rovi Corp. (now TiVo), which operates electronic program guides for MVPDs, launched a shoppable guide in 2011. Delivery Agent—which provided commerce services for Rovi, Twitter, YouTube, and others—equipped Samsung and Sony smart TVs with ShopTV, an app that "expands the function of the TV in the home by allowing television viewers to shop for products seen in network programming and advertising via their remote control."¹²³ Even before introducing ShopTV in 2013, Delivery Agent was supporting a variety of t-commerce functions, including letting Verizon Fios customers buy memorabilia related to programs on the History Channel. By 2013, Delivery Agent counted three broadcast networks and more than fifty cable channels among the clients for which it "sell[s] licensed merchandise from TV programming."¹²⁴ Having overcome the barrier of "getting that living room connected," Mike Fitzsimmons, CEO of Delivery Agent, told CNBC in December 2015, "this idea of having a tethered experience between the content that you're viewing and the ability to purchase is becoming a reality."¹²⁵ A year earlier, when he announced that a shoppable H&M advertisement would air during the 2014 Super Bowl,

Fitzsimmons said t-commerce at last had realized “the potential associated with buying Jennifer Aniston’s sweater.”¹²⁶

Less than a year after Delivery Agent filed for bankruptcy protection in 2016, Fitzsimmons started another company, Connekt, to continue chasing this elusive dream. According to a generous company profile in *Broadcasting & Cable*, “the technology appears to have finally caught up to the idea.” By bringing t-commerce to IP-connected devices, including Roku players, smart TVs, and STBs, “Connekt appears to have figured out how to turn viewers into instant consumers with the touch of a remote button.”¹²⁷ History should inspire some skepticism of this appraisal.

These enterprises remain committed to an ambition that courses through the history of commercial media. Yet, despite the promotional hype, shoppability remains marginal to the television business and most viewers’ experiences. What accounts for the tenacity of this idea and what has delayed its implementation?

Persistence and Resistance

The persistence of shoppability is not totally surprising. Convinced that t-commerce is imminent, an executive at Acxiom expressed the common sentiment that “TV remains the most powerful medium for engaging consumers.”¹²⁸ In addition to its reach, television is thought to be the premier venue for exhibiting products and brands.¹²⁹ The emotional register achievable on television and the connections viewers form with programs and characters help explain why marketers exhibit a stubborn attachment to the model of interactivity devised by HyperSoap, a project which was described in retrospect as having begun “with dreams of buying the sweater off Jennifer Aniston’s back.”¹³⁰ Marketing researchers have even singled out *Friends* for its extraordinary influence on consumer attitudes.¹³¹ But what dynamics underlie and undermine efforts to merchandize television entertainment?

“Persistent patterns of technological change,” Donald MacKenzie observes, “are persistent in part because technologists and others believe they will be persistent.”¹³² The expectation of a “technological trajectory” can function like a self-fulfilling prophecy, as actors invest financially and symbolically in prevailing ambitions. The evidence detailed above shows how expectations and ambitions framed problems and potentials for systems-builders. Shoppability was a compelling answer to important questions confronting cable operators beginning in the 1970s, including how to win valuable franchises, diversify revenues, and excite investors and regulators. For the broader multichannel television industry, shoppability was part of a wedge for expanding the cable business beyond retransmission, and it complemented larger efforts to exploit the capacity of broadband wires and STBs. As an alluring and long-imagined consumer service, interactive shopping was also a public relations device for a political-economic agenda of convergence; it shimmered on the surface of a wave that swept through communications markets and policy in the 1990s. From the 2000s onward, shoppability has been a hopeful bulwark against existential threats to television, as financial support is imperiled by audience fragmentation, advertising avoidance, and competition from digital advertising platforms. The

vigorous return of product placement and brand integration strategies during these years added fuel to t-commerce aspirations.¹³³ Along the way, these dreams and efforts spawned legions of firms committed to aspects of shoppability and advanced advertising, many of which understand themselves to be working within some part of the “television” business. Their collective energies, associations, and histories (including employees’ training and career paths) help sustain a shoppable agenda within particular industrial paradigms, networks, and boundaries.

Across these decades, shoppability has aroused marketers’ fundamental interest in using communication technologies to accelerate the circulation of commodities. Transactive television promises advertising’s holy grail, merging medium and marketplace. Shoppability is an affordance built into technologies to match the logic of commercial media, put succinctly in *Advertising Age*: “The business of marketing and the business of entertainment are fundamentally about the same thing: Turning audience attention into commerce.”¹³⁴ Without marketplace connectivity for transacting sales, though, this system operates below capacity. For the CEO of Delivery Agent/Connekt, shoppability actualizes television’s full potential: “Entertainment properties create demand for consumer product, and there’s a broken link between viewers and networks.”¹³⁵ “We’re trying,” he says, “to take a passive viewing audience and turn them into an active, purchasing consumer.”¹³⁶ Whether or not this corresponds to the experiences of viewers, shoppability clearly is a concentrated expression of a marketing logic that has contributed to the meaning of “television” and its industrial, technological, and cultural dimensions.

But if shoppability satisfies these functional roles, why has the “prophecy” of selling Aniston’s sweater gone mostly unfulfilled? As historians demonstrate, technologies become operative not through pure affordance but through the work of binding them to durable organizational and cultural forms.¹³⁷ In commercial TV, the potential implied by shoppability—to accelerate the circulation of commodities—confronts the limitations of a sociotechnical system situated historically in an institutional setting, wherein the uses of specific technologies are circumscribed by established practices, priorities, competencies, and norms. Commercial television was built, across several decades, to use video content to attract the attention of viewers which could be sold to advertisers. The dominant TV networks provided national brands with economies of scale in accessing potential customers, and those advertisers settled for buying audiences rather than buying sales. T-commerce entails a contradiction here, as it implies better audience measurement and teases the prospect that advertisers could pay only for verified sales, yet it conflicts with industrial processes for commodifying audiences. As the “audience,” in institutional perspective, is an abstraction that becomes tangible through exchange relations, vested interests have instituted an elaborate architecture of rituals and routines to facilitate efficient and standardized transactions.¹³⁸ These institutionalized “sets of practices, behavioral patterns, and analytical orientations and priorities” constitute an *administrative infrastructure* that shapes the operation of commercial television.¹³⁹ Executing shoppable advertising campaigns involves costs and complexities that depart from traditional metrics of success and efficiency, and the process enrolls MVPDs in a larger advertising role than that for which experience has prepared them. Despite the potential to enable consumption behavior, which is the inferred basis of audience value, shoppability has not been institutionalized to

supplant many taken-for-granted and still-lucrative ways of thinking and acting that emerged within television's historically specific configurations. In a final irony, the expensive and protracted deployment of digital STBs, fueled by futuristic promises, now *discourages* MVPDs from shifting *en masse* to IP delivery systems that could better accommodate interactive advertising and shopping.

Finally, we must acknowledge that TV viewers' habits and rituals are not easily reconfigured for shopping. Unless viewers can pause programming and resume it after inspecting a product, t-commerce likely conflicts with viewing priorities. Even in on-demand environments, the "engagement" with content that is thought to prompt the desire to buy a character's sweater might blunt this effect if viewers prefer not to press pause. In short, most textual forms and viewing behaviors remain hostile to shopping interruptions. And the fact remains that laptops and mobile devices support friendlier and more familiar shopping experiences than TVs.

This brief discussion suggests that administrative infrastructures (and cultural institutions) can have conservative influences akin to those attributed to physical infrastructures. Professionals and organizations, through established competencies, vocabularies, mandates, and workflows, contribute to a system's momentum and resistance to change. In television, norms patterned around maximizing the reach of advertisers' messages have not easily accommodated new evaluative criteria that imply different ways of transacting, understanding risk, and gauging success. The aspiration of exploiting television's full marketing capacity, encouraged by the technological possibilities elaborated throughout the development of cable TV, brought innovative pressure into conflict with institutionalized industrial practices. Recognizing these contradictory influences helps to explain the disjuncture between revolutionary forecasts and the stubborn pace of sociotechnical change. The translation from imaginable affordance to instituted capacity is seldom swift or smooth.

Conclusion

This paper has documented the persistence of shoppability as an aspiration in television and cable industries. It illuminates some ways in which the discursive construction of technological affordances, and the efforts to manifest them, shaped our communications systems. From the late 1960s through the 1990s, as the cable television and telecommunications industry worked to define its place in a convergent media landscape, interactive home shopping starred in seductive stories about the future of entertainment and information services. These stories influenced the contours of cable's footprint and regulatory framework and were built into hardware and software as part of an effort to position digital cable boxes as the domestic portal to a version of the information revolution that was inflected, in part, by mindsets and structures from commercial television. From 2000 to the present, the prospect of selling Jennifer Aniston's sweater lingers as the purest expression of marketers' ongoing efforts to turn any medium into a marketplace. But the failures to realize shoppability, as it has been imagined, show the ways in which media systems become bound to relatively durable institutions and infrastructures. The story of shoppability illustrates

both the general pressures on communication systems in capitalism to expand and accelerate commodification and market exchange and the variety of contradictions manifested in that process.

As ongoing developments reopen technological and industrial possibilities, as confidence in the legitimacy of legacy institutions wanes, and as new stakeholders pursue points of entry to implement their visions, shoppability remains a potent discursive tool. Researchers should continue to evaluate its impact on the development of communication systems. Perhaps the greater question is how shoppability, as constructed around television, shaped the internet. Popularization of the internet and the emergence of graphical web browsers coincided with pervasive discussions about how to engineer interactive media systems into platforms for targeted advertising and electronic commerce.¹⁴⁰ As it exists today, the web is the fullest expression of what people imagined as television's future: a commercial platform defined by addressability, accountability, and shoppability. This paper shows that the imaginaries, paradigms, and priorities through which industrial actors perceive and try to frame the potential of new media technologies shape our information and entertainment environments. In the histories of shoppable media, we see how blue skies can become blueprints.

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³ The author thanks Sharon Black, of the Annenberg School for Communication, for her extraordinary librarianship. Thanks, also, to Opeyemi Akanbi, Vincent Manzerolle, and Joseph Turow for providing helpful feedback.

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