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## BEYOND THE TERRESTRIAL?

### NETWORKED DISTRIBUTION, MULTIMODAL MEDIA, AND THE PLACE OF THE LOCAL IN SATELLITE RADIO

ALEXANDER RUSSO AND BILL KIRKPATRICK

For most people in the United States, “satellite radio,” means direct broadcast satellite radio—Sirius and XM, which merged in 2008. These are relatively new players in the broadcasting world, beginning to beam their programming only at the start of the twenty-first century. Surrounding this form of satellite radio are discourses of newness and difference from “terrestrial radio”—new technologies, new choices, new possibilities for niche programming, and new business models. “Radio has been stuck in an engineering time warp for two generations,” wrote Mike Langberg in the *Philadelphia Inquirer*, “[and] not much has changed since the introduction of FM about forty years ago.” But now satellites are ushering in a “space-age radio revolution.”<sup>1</sup>

Such rhetoric is misleading. Although satellite broadcasting may be colloquially thought of as a new technology, a perception encouraged by the “satcasters” themselves, such a notion elides a much longer relationship between U.S. radio and satellite technologies. Indeed, the rhetoric of the revolutionary “newness” of satellite radio, which conceives of satellite radio in opposition to long-established practices of terrestrial radio, silences the many ways in which satellite has a long and important role in American broadcasting, and masks a number of contradictions within radio practice today. This chapter seeks to reclaim satellite radio’s history to attend to the ways it acts in conjunction with terrestrial radio as a multimodal distribution technology profoundly affecting what listeners have been hearing for decades. This focus on the relationship between distribution and content follows Lisa Parks’s recent challenge to the fields of television and media

studies to examine the impact of distribution technologies. She suggests, “if television technology is a historically shifting form and set of practices, then it is necessary to consider more carefully how the medium’s content and form change with different distribution systems.”<sup>2</sup> The same is true of post-1950s radio, the histories of which have largely conceived of the medium in terms of the station and its local audience, despite the fact that this narrative omits how and why certain kinds of program content reached the station. Satellite radio is one such system, consisting of a hybrid of distribution technologies: traditional terrestrial station-to-receiver broadcasts as well as the systems required for stations to obtain the programming and commercials they then rebroadcast. In its initial iterations, satellite radio was conceived as a means for two-way program exchanges as well as unidirectional program distribution. A policy context of deregulation and the acceleration of radio formats contributed to the dominance of the latter model in the 1980s and into the 1990s, when satellites were used to syndicate programs to revived radio networks. More recently, personal satellite receivers and program providers like XM and Sirius have emerged, operating in ways that are both in opposition to and in accordance with long-standing norms of terrestrial radio.

A historically informed look at the role of satellites in U.S. radio reveals that satellite technology has been central to “terrestrial” radio for decades, participating in major industrial shifts since the 1970s. These shifts include the proliferation of national networks, the increasing centralization and automation of programming, the intensification of audience segmentation, and an ongoing crisis in the supposed ontological qualities of “good” radio, namely “liveness” and localism. In this sense, the satellite radio of Sirius XM does not represent a strong break with terrestrial broadcasting—a “revolution” as popular imagination and marketing discourses would have it—but rather a continuation of long-standing trends and tensions in radio practice. This perspective also reveals how personal digital satellite radio’s replication of the dynamics of terrestrial radio has made it particularly vulnerable to competition from the technologies of media convergence and helps account for its tenuous future.

### **Satellites and Radio Broadcasting: Multimodal Media**

Although the first commercial telecommunications satellites went into orbit in 1962, satellites were not regularly used for program distribution in the United States until the 1970s. Western Union’s launch of Westar I in 1974 provided new possibilities for distribution but was at first largely limited to television networks. Less discussed was interest in satellite distribution by radio news networks, which at the time delivered their national programming primarily over AT&T’s landlines. Although some of these companies bore the

names of iconic radio networks of the 1930s and 1940s, they were radically diminished entities in the age of television. In the late 1970s, commercial radio networks provided relatively small amounts of programming, usually just five minutes of news per hour and assorted features. In addition, while stations as a whole were enjoying large profits, networks were increasingly losing money. In 1976, a year in which radio stations enjoyed profits of US\$172 million, a 70 percent increase over the prior year, the major networks (CBS, Mutual, NBC, and ABC's four networks) lost US\$5 million, doubling their losses of the previous year. For networks that owned affiliates, station revenues offset the losses.<sup>3</sup> The lone exception, Mutual, did not own its affiliates and, not surprisingly, was the first to turn to the new technology of satellites to distribute its programs.

The networks saw four principal advantages to satellite radio: cost savings over landlines, multiplexing (delivering multiple content streams), improved sound quality, and (at least initially) the possibility of two-way content streams. All of these appealed to National Public Radio (NPR), one of the earliest adopters of satellite distribution. When the Corporation for Public Broadcasting (CPB) inaugurated plans to distribute PBS television programs via Westar I, NPR sought to "piggyback" its signal on the TV network's transponders.<sup>4</sup> As Jack Mitchell has chronicled, in 1978 NPR was able to appropriate 25 percent of the CPB budget to fund its satellite build-out. For news networks with numerous affiliates and a need for live national distribution, satellites offered substantial cost savings; in NPR's case, this reduced distribution costs for some programs from US\$1,500 to US\$50.<sup>5</sup> For nonlive programming, producer stations often relied on "bicycling," or physically sending tapes to individual affiliates, and NPR was understandably eager to cease being "a radio network that depends on the god-damn postal service," as its president, Frank Mankiewicz, colorfully noted in 1978.

Mutual, one of the other early advocates of satellite distribution, shared with NPR a larger and wealthier parent as well as a nontraditional affiliate structure. The network moved toward satellites shortly after its 1977 purchase by Amway. The large direct-merchandising company provided the network with an infusion of cash to finance its build-out via Westar IV.<sup>6</sup> Unlike NPR, Mutual was interested in a downlink-only system with small-size dishes. In 1979, Mutual was joined by another news network that did not own its affiliates, the Associated Press (AP). The AP's initial plans involved a 660-station network with thirty-seven uplink stations. It claimed that satellite transmission would save US\$760,000 per year over phone lines.<sup>7</sup> Most other commercial broadcasters were more ambivalent about satellite program distribution.<sup>8</sup> NBC, ABC, and CBS embraced satellite distribution between their major production studios by 1979, but did not equip their affiliates with

satellite dishes to receive the programming directly.<sup>9</sup> These networks had long-term contracts with AT&T and continued to use wire lines to send programming to affiliates until the mid-1980s.<sup>10</sup>

Nonetheless, the rising importance of FM and format consultants (and the subsequent institutionalization and standardization of much of the FM dial) would decisively affect how satellites were used. In the late 1960s, FM was, as Susan Douglas describes it, “not just a technical reaction against AM; it was a cultural and political reaction as well.”<sup>11</sup> According to Douglas, the “free-form” or “underground” stations rejected the high-tempo, strong-sell antics of 1960s Top 40 in favor of a laid-back approach that emphasized long cuts of counterculturally oriented “progressive rock” music. Commercial station owners were initially reluctant to embrace such formats and deemed them unprofitable, but by the mid-1970s new audience research focusing on narrowly defined demographic groups and the reimposition of tightly formatted playlists homogenized and rationalized FM broadcasting. In 1973, FM had a 28 percent share of the radio audience. Five years later it was up to 49 percent, and in 1979 it would overtake AM.<sup>12</sup> These changes, often driven by a reliance on professional consultants such as Lee Abrams and California’s Drake-Chenault Enterprises, dramatically increased the profitability of FM stations and established the template for program philosophies that would become increasingly important in the satellite era.

At the same time, consultants and owners were eagerly anticipating the refinement of technologies to automate and computerize stations. Rudimentary automation systems like the Gates “Autostation” had been introduced as early as the 1950s and were becoming more practical by the 1970s.<sup>13</sup> One-seventh of all stations were automated by the mid-1970s, although these were largely “beautiful music” stations that featured few, if any, interruptions by disc jockeys.<sup>14</sup> One limiting factor for automation was program distribution. FM was predicated on high-quality stereo sound that AT&T landlines were incapable of carrying. Program syndicators had to record music and vocal breaks on audio tape and then use bicycle distribution to deliver them to stations. This cost much less than wire line charges, but it limited programmers’ flexibility while also violating the principle of liveness that had been a key marker of “quality” radio since the 1920s. The resolution of such issues became an important part of how satellite technology found a home in terrestrial broadcasting.

Programming syndicators were initially wary of satellite distribution because of the cost involved, but this quickly changed. In a panel discussion titled “The Syndicated Program Revolution” at the 1979 National Association of Broadcasters Annual Radio Programming Conference, one syndicator dismissed satellite distribution as “untried, untrue, and very expensive.”<sup>15</sup> Tom Rounds, president of Watermark, the syndication firm that produced Casey

Kasem's *American Top 40*, did not think satellite distribution would be cost effective until "a majority of stations have dishes in their parking lots."<sup>16</sup> This skepticism was misplaced, however. One month later, the Federal Communications Commission (FCC) relaxed its requirement that Earth stations must be capable of transmitting as well as receiving, making it much less time-consuming and expensive to equip network affiliates with receive-only dishes.<sup>17</sup> Within two years, so many new satellite-delivered program services had entered the arena that syndicators began talking of their industry as a "Darwinian world" of increased competition for affiliates and listeners.<sup>18</sup> This dramatic shift of perspective among syndicators was replicated across the broadcasting industry as U.S. radio found both new uses as well as older adaptations for satellite distribution.

### **The Integration of Satellites into Radio Broadcasting**

By 1981, it was clear that satellites would be an integral component of much radio broadcasting, and the first half of the 1980s became an era of resolving the regulatory issues involved, consolidating new business models and industrial relationships to take advantage of satellite distribution, and squaring the philosophical contradictions that satellite-delivered programming represented to an industry that still privileged liveness and localism in its notions of quality, however half-heartedly or even hypocritically. It was not that every station owned a satellite dish by the mid-1980s, or even necessarily wanted one, but the political, economic, and cultural structures of the satellite's role in U.S. radio were largely in place by that time. This set the stage for the consolidation and nationalization of programming trends that characterized the second half of the 1980s and the 1990s.

Although the rapid adoption of satellite distribution was not inevitable, several aspects of the era facilitated the emergence of the satellite boom of the early 1980s. First, the broader recession of the late 1970s had resulted in an ongoing economic crisis in the radio industry, but in a way that fell differently on different sectors. Although there was a downturn in the industry as a whole, in 1980 network advertising sales increased 33 percent and national spot sales rose 45 percent.<sup>19</sup> National advertisers turned to radio as a cheaper alternative to television, thus making satellite networks an ever more viable alternative to the national spot advertising market, a shift encouraged by the increasing demographic segmentation that radio provided. Satellite networks and syndicators therefore stood at the intersection of two key commercial imperatives for large sponsors: efficient national saturation and the ability to effectively target niche audiences. In this, satellite radio offered the same advantages as cable television networks, which were also gaining popularity around this time, but at lower cost and with hundreds of millions of radio receivers already in place.

A second important contextual element in the growth of satellites was the ongoing deregulation of the media industries that began under President Jimmy Carter and accelerated during the Reagan era. Federal regulatory support for localism was weakened during this period, easing the adoption of nonlocal satellite programming by local stations. Dating to the 1920s, localism describes a regulatory philosophy that required stations to justify how their programming served community interests of the area in which they were located, policies that broadcasters had long viewed as a thorn in their sides.<sup>20</sup> In 1981, the FCC reduced station obligations to meet with community leaders and air public affairs programs that addressed local issues. This allowed broadcasts to slash news staffs or even eliminate locally originated news programming altogether. The cumulative effect of these changes was a regulatory climate in which stations faced substantially less political pressure to produce local content or justify the public-interest merits of their programming choices. This, in turn, allowed them to feel increasingly confident in using more nonlocal content. With satellite technology maturing and lower costs as a key selling point, satellite distributors were perfectly poised to take advantage of this new regulatory attitude; as one executive of the Satellite Music Network put it in 1981, "We didn't have deregulation in mind when we started the network, but I think it will help us by making it easier for hopeful customers to change their formats and switch to our service."<sup>21</sup>

Against this backdrop, several radio networks followed NPR's and Mutual's lead by moving heavily into satellite distribution in 1981 and 1982, most notably RCA. Although some networks, like RKO, provided satellite dishes to their affiliates in exchange for long-term contracts, the price of dishes was falling precipitously enough that many stations began purchasing them on their own. So many distributors wanted to get into the game that there was a temporary shortage of transponder space, a condition that was made more acute when RCA's Satcom III was lost in space in 1979. By 1983, there was again enough capacity for a multitude of companies to affordably turn to satellites, including ABC, NBC, and CBS all using Satcom I-R.<sup>22</sup> Satellite distribution offered not merely cost savings and higher quality but also solved the problems of timeliness and flexibility faced by syndicators in bi-cycling distribution. Importantly for the medium's development, downlinks were cheaper and more plentiful than uplinks, privileging a model of a few centralized content providers feeding programming to individual stations rather than an open market of hundreds of individual stations potentially providing satellite-delivered productions to hundreds of other stations.

The technological possibilities of national satellite distribution dovetailed with the industry's already strong and growing reliance on market research and programming consultants; indeed, many of these emerging satellite networks were connected with the same radio consultants who had

pioneered formats in the 1970s. Satellite networks claimed to provide one-stop shopping for on-air talent, expert research, and playlist consultation, at a lower cost than individual stations could reproduce on their own. An important part of this shift was the move from a few minutes of satellite-delivered news to longer-form programming; increasingly, radio networks offered play-by-play sports coverage, concerts, and other special features.<sup>23</sup> At the extreme end of this trend, 1981 and 1982 saw the launch of fully automated twenty-four-hour “turnkey” services, such as Chicago’s Satellite Music Network (SMN) on Satcom III-R and ABC’s New York-based Superadio on Westar III; these services potentially eliminated the need for a local programming staff altogether. One SMN executive boasted, “[a]ll you need is your sales department and a production guy,” since his company offered complete programming in the adult contemporary, country, or MOR (middle-of-the-road) format for less than US\$1,000 a month.<sup>24</sup> In practice, most affiliates continued to program the lucrative drive time on their own, as well as local inserts during the daytime hours. Turnkey operations first took off in the overnight shift in smaller markets, where it rarely paid to have live local talent running the station.<sup>25</sup>

Satellite technology was thus developing hand in hand with research-fueled niche marketing and computerized automation, each driving the other through technological development, shifting programming philosophies, reduced regulatory enforcement of localism, and above all the economic advantages of these new ways of doing radio. However, such changes challenged long-held ideas about “quality” radio as being local and live—ideas that might have seemed antiquated or obsolete, but that held powerful sway over broadcasters, regulators, and audiences. As automation and turnkey services increased, so did the need to reconcile them to the industry’s ideas about itself. The satellite boom of the early 1980s thus also included the uneasy justification and legitimation of these practices on the part of several different formations within the industry and the public at large.

In particular, the diminishment of the value of local content during this period required a fair amount of ideological negotiation. The postwar era had allowed the appearance of a comfortable and easy understanding of the social role of media forms: TV was supposedly primarily (although never exclusively) “national,” while radio was primarily “local.” In that context, broadcasters had been told for decades that local service was not just their duty as federal licensees but also good for the bottom line—yet these new distribution possibilities challenged broadcasters to rethink their operations as smart businessmen, responsible trustees of the public interest, and “showmen” offering quality radio.<sup>26</sup> “More and more stations,” said one consultant in 1981, “are having to decide whether to go with nationally distributed pro-



gram formats or increase their emphasis on community needs.”<sup>27</sup> Although that either-or formulation was overstated, the early 1980s were rife with discussions about how to reconcile such tensions.

On the policy side, even as the FCC voted six to one to relax local content requirements in 1981, regulators claimed that they were not abandoning local public-service programming. As one commission staffer claimed, “[T]he issues have to be local [but that] is not to say that the only way to serve a local outlet is through local programming.”<sup>28</sup> Likewise, FCC commissioner Joseph Fogarty stated that he would not want “the religious principle of localism to stand in the way” of satellite build-out.<sup>29</sup> Such pronouncements worried some in the industry as stations embraced satellite syndication. In 1982, a National Association of Broadcasting (NAB) panel of radio network executives promised that their programs “are merely tools and not necessarily the end of local programming.”<sup>30</sup> Two years later, in the context of moves to relax ownership caps on radio stations that were de-localizing content and ownership, Bernie Mann, head of the National Radio Broadcasters Association, tried to reassure broadcasters that “radio is a very local business. . . . Let Sears try to run radio stations like they run department stores. It just is not the same business.”<sup>31</sup>

Similar ambivalences were found in industrial discussions of the value of localness as a register of quality—a definition that existed uneasily with emerging practices of national satellite distribution. Satellite networks and syndicators themselves bent over backward to reassure potential affiliates that they could air satellite-delivered content and still be—or at least *sound*—local. For example, a 1982 ad for SMN read: “Local identification is another area of great concern to station operators. . . . Local I.D.s, local news, traffic reports and even special locally-produced shows can be easily accommodated. Most listeners . . . aren’t even aware that they’re listening to a radio network.”<sup>32</sup> Many stations did indeed create exactly such hybrids, repackaging satellite-delivered programs with local deejays and opportunities for local listeners to call into the station. KTRH in Houston, Texas, for example, would have its local on-air staff announce a nationally distributed sports program, play the program and a network spot commercial, return to local staff commenting on the program, and then open the phone lines to local listeners.<sup>33</sup> The head of ABC Radio, Ben Hoberman, touted this kind of synergistic relationship between his networks and their affiliates as a selling point for satellite services: “Stations may now take satellite feeds from national program sources and seamlessly cut in and out, adding the key ingredient—local flavor and identification.”<sup>34</sup> The early 1980s were full of such pronouncements that local identity still mattered and that satellite distribution was compatible with a station’s commitment to localism. Although these struggles over radio continued and played out differently on

a market-to-market basis, they did not markedly slow the incorporation of satellite technology into terrestrial broadcasting.

One reason for the lack of consensus on the value of “the local” was the decline of mass-oriented broadcasting and its replacement by niche-oriented narrowcasting. The multiplexing capabilities of satellite distribution challenged the popular equation of “network” with “mass.” ABC alone had six different demographically distinct networks in 1982 spread over 1,800 affiliates.<sup>35</sup> Possibilities of multiple content streams provided a powerful additional rationale for early adopters of satellite radio programming. Ostensibly, they saw it as a way to combine national content with local station choice, but their plans suggest ways in which industrial and regulatory definitions of localism fit uneasily with the developments of formats and national consultants. For example, Mutual planned to offer three or four programs per market to 500 of the stations within its network of 700 affiliates. The company’s president, Gary Worth, described these plans as “extending to a national level the previously local idea of multiple formats.” In a similar fashion, NPR noted that satellites would enable the network to offer its affiliates breaking news or feature-length cultural programming for the same time-slot.<sup>36</sup> Segmenting audiences by age, religion, political orientation, or race and ethnicity, multiplexing recast localism as the satisfaction of local preferences from among nationally produced offerings—a state of affairs resonant of network-affiliate relationships in the 1930s and 1940s.

From the mid-1980s through the 1990s, the industry pursued strategies of consolidation facilitated by a deregulatory environment that reduced restrictions on the number of stations a single entity could own. In 1984, San Antonio-based Clear Channel Communications, up until then a fairly small ownership group concentrated in the Midwest and South, went public and purchased Broad Street Communications, giving it twelve radio stations.<sup>37</sup> The following year, industrial conventional wisdom was upended when Capital Cities, a company largely focused on small-market stations, purchased ABC, including its radio networks. This purchase shocked the industry, which considered Capital Cities a small-market group, hardly the equal of the legacy network. However, as Cap Cities, Clear Channel, and, later, Infinity would also show, smaller-market stations were inexpensive and, collectively, could produce significant profits. These station groups further developed centralized modes of radio production that made use of satellite-distributed programming.

The increasing size of ownership groups oriented toward second-tier markets dovetailed with the increased use of satellites for distribution of national music and talk formats. For the declining AM band, hampered in the competition for music listeners by its poorer sound quality, satellite distribution made feasible nationally syndicated live talk shows, particularly

sports and right-wing political programs (especially following the elimination of the Fairness Doctrine in 1987).<sup>38</sup> At the same time, the use of satellite networks to distribute music intensified and branched out from the fairly anonymous adult-contemporary and beautiful music formats to pop, rock, country, and metal. Critically for these small-market stations, the ability to obtain inexpensively what they perceived as higher-quality programming drove their decisions.<sup>39</sup> Moreover, by this time the cost of a receive-only satellite dish was less than US\$5,000, making the move into satellite-distributed programming affordable for nearly any station.<sup>40</sup>

These debates over the nature and quality of terrestrial radio and trends toward national distribution prefigured many of the struggles that U.S. radio would face again in the 1990s and 2000s with the emergence of XM and Sirius. The local continued to exist as an abstract, albeit contested, value; although no longer enforced in practice, localism remained important within industrial and popular rhetoric as a register of the connection between a station and its audience. Still, discourses of taste, cultures, and audience preferences began to supplant ideals of a public interest at the same moment that centralized national satellite distribution began to offer the demographically distinctive programming that could sound local. The tensions between technological possibilities, industrial practice, and promotional discourse would play out in the development of direct broadcasting services in the 1990s and 2000s.

### Satellite Digital Audio Radio Service (SDARS)

In 1981, an article in *Broadcasting* peered into the future to predict the state of broadcasting in 2001. “The cornerstone of the broadcasting medium in the future will not be the local station alone, however. It will be joined . . . by high-powered communications satellites that, hurtling through space at ten times the speed of sound, will beam multiple channels of programming to virtually every home in the country.”<sup>41</sup> This prediction was uncannily accurate: in 2001 XM Satellite Radio began sending signals from its Washington, D.C., studios to its XM-1 and XM-2 satellites. However, the radio industry resisted rather than embraced the path to individualized satellite radio reception, and the eventual emergence of satellite-based digital audio radio service, or SDARS, was fraught with conflict and hesitation. Ultimately, this tension had less to do with conventional understandings of radio as an aural medium than in the investments of a wide variety of actors who conceived of the use of satellite technology in widely divergent ways.

Neither of the two major organizations that were ultimately responsible for developing SDARS had primary interests in broadcasting. Both Satellite CD Radio (which soon dropped “Satellite” and, later, became Sirius) and

American Mobile Radio (AMR) (later to become XM) had leadership with backgrounds in cellular telephony and other nonbroadcast use of satellites. Satellite CD Radio was half-owned by Martin Rothblatt, who had run GeoStar, a vehicle tracking system; its CEO, Dave Margolese, had a background in cellular telephony. AMR was a subsidiary of American Mobile Satellite, which had interests in cellular telephony and other mobile data-tracking systems and was itself partially owned by General Motors subsidiary Hughes Aero-nautics; AMR's CEO, Hugh Panero, came out of the cable television industry.<sup>42</sup> These industrial connections suggest ways in which distribution concerns were the primary focus for these companies during the initial years of the development of SDARS, with content a distant second.

As it had with direct-to-home satellite television service, the traditional broadcasting industry viewed SDARS as a threat and opposed it from its inception in the late 1980s and early 1990s.<sup>43</sup> Despite industrial trends toward national programming distributed to stations via satellites, the NAB immediately and consistently invoked the threat to localism as its principal objection to SDARS and predicted "possible dire consequences" should satellite digital radio be developed.<sup>44</sup> One particularly apocalyptic station owner was Saul Levine of KKKGO in Los Angeles, who called SDARS "diabolical" and predicted that his station would be "destroyed" by it.<sup>45</sup> All the while Satellite CD Radio and AMR denied that they planned to offer local news, weather, and traffic reports.<sup>46</sup>

Although these objections did not prevent CD Radio and AMR from receiving authorization from the FCC, the obstruction significantly delayed their plans, both directly and indirectly.<sup>47</sup> Initially, CD Radio had hoped to begin operations in 1995 but had to convince the FCC that SDARS would not harm the public interest.<sup>48</sup> Additionally, the objections by terrestrial broadcasters highlighted the limited market for SDARS radio, making it more difficult for CD Radio and AMR to secure the capital necessary to develop SDARS receivers and launch satellites.<sup>49</sup> Indeed, much of the decade's press and trade coverage displayed a marked skepticism toward the success of SDARS: would listeners be willing to pay for radio—that most humble of media they were so used to receiving for free?

In response to industrial resistance and investor skepticism, the SDARS industry articulated an evolving series of rationales for its product. These included historical analogies to the success of cable: "cable for the car," as *Automotive News* put it.<sup>50</sup> The possibility of beaming a cablelike variety of content into cars helped the industry secure investment and partnerships (General Motors and Honda would each invest US\$50 million in XM in 1999 and 2000). Other rationales positioned satellite radio as the answer to what the SDARS firms perceived as the source of the public's dissatisfaction with terrestrial radio: too few genres, too many commercials, and too narrow

playlists. They also crafted appeals to ill-served rural audiences and the passionate fandom of niche audiences whose favored genres were getting no air-play: “There are around forty-five million people in this country who live in markets that have five or fewer radio stations,” pointed out a Sirius marketing executive. “In Detroit, there is no classical radio station. In New York City there is no reggae station.”<sup>51</sup> Some analysts suggested that the reduced advertising alone would be enough to get listeners to pay: “[T]hey are paying for [terrestrial radio] now—they’re paying for it with their time.”<sup>52</sup>

Ultimately, it took satellite DARS until 1997 to secure authorization from the FCC. Soon thereafter “satcasters” turned to programming. AMR hired famed programming consultant Lee Abrams, in many ways an ideal choice. Abrams had pioneered formatting and market research in the 1970s and satellite network distribution in the 1980s, making him familiar with both the technological and content aspects of satellite broadcasting. AMR thought that Abrams’s reputation as a format guru would enable XM to develop the large number of program formats that would comprise its service. Abrams’s history developing satellite networks also placed him squarely against localism, which he noted “doesn’t mean anything anymore,” since “with a few exceptions, local radio died years and years ago.”<sup>53</sup>

Abrams applied many of the same procedures used in FM broadcasting to satellite radio, with the crucial difference of bandwidth. He replicated existing logics of segmentation and psychographics in hopes that enough niches could equal a mass. There is some evidence that, at least initially, Abrams de-emphasized his research techniques (retail callback cards, focus groups, and polling at live concerts) in favor of more free-form programming, although XM’s financial woes later caused it to emphasize its research-driven “hits” channels that more closely resembled terrestrial stations. In another irony, Abrams used disc jockey talent that had been displaced by the voice-tracked programming strategies that came out of satellite network distribution.<sup>54</sup> Abrams also made programming pacts with national content providers like *USA Today*, Bloomberg News Radio, and C-SPAN, but focused primarily on individual music channels.<sup>55</sup> This strategy of programming brands was exceeded by XM’s New York City-based rival Sirius that, most famously, hired shock-jock Howard Stern for a five-year, US\$500 million contract, touching off a bidding war for high-profile talent that added to both networks’ heavy debt load. Despite such offerings, by the time XM launched its satellites in 2000, people had numerous other means to listen to a wide variety of programming, including car CD players, Internet radio stations, and MP3 players.<sup>56</sup> Even before launch, some skeptics worried that satellite radio was “behind the times” and “too late” for its business model.<sup>57</sup> Still, there was enough confidence in the service among potential investors that, in addition to General Motors’ US\$50 million, Clear

Channel invested US\$75 million in XM, and DirecTV (linked with Hughes) invested US\$50 million in 1999 as well.<sup>58</sup>

By the time XM and Sirius were ready to begin service in 2001 and 2002, respectively, public discontent with terrestrial radio was widespread, with listeners and media reformers alike lambasting the standardization and automation of contemporary radio. Such complaints were as old as broadcasting itself, of course, but they had been intensifying throughout the 1980s and 1990s in rough correlation to the consolidation of the radio industry. Even before the 1996 Telecommunications Act, companies such as Clear Channel and Infinity were butting up against the FCC's relaxed ownership limits, which grew from seven in 1981 to forty in 1996. Following the 1996 act and the resulting waves of conglomeration and centralization in radio, these complaints took on a new political urgency as influential media critics, most prominently Robert McChesney, drew political-economic connections between media consolidation and the power of conservative politics in the United States.<sup>59</sup> By the time of the emergence of XM and Sirius, terrestrial radio had, for many, come to represent not just standardization within the corporate music industry, or cultural standardization in American life more broadly, but also something of a standardization of political discourse dominated by the Right.

Against this backdrop, the revolutionary rhetoric that accompanied the rollout of the XM and Sirius SDARS systems seized on the idea of "satellite radio" as a potential (if necessarily only partial) solution to the terrestrial radio of the day. Lee Abrams, for example, promised that XM would break with past broadcasting models to allow each channel to offer a unique "point of view, without compromise."<sup>60</sup> Yet even at this moment of literal and figurative launch, there were already indications that satellite radio marketers were fighting the previous (and thus the wrong) war. More precisely, satellite radio and terrestrial radio were fighting each other over shares of a music industry that was undergoing transformations that stood to leave both of them behind. As Jody Berland has pointed out, the programming philosophy perfected by Abrams and others was predicated on a conception of audiences as more or less preformed demographic typologies that could be attracted by playing the music they liked—the listeners as the "target" of targeted programming: "Format music programming styles thus appear to spring from and articulate a neutral marriage of musics (country and western, Top 40, etc.) and demographics, and to correspond opportunistically to already established listener tastes, whose profiles are discovered through the neutral science of market research."<sup>61</sup>

The problem with this conception, argues Berland, is that listener tastes "are an effect, as much as cause, of this specialization process."<sup>62</sup> In other words, satellite radio might have offered more channels, but did nothing to

alter this industrial conception of audiences as taste communities at whom radio pushed content. At the same time, however, new media technologies were allowing listeners to discover for themselves, through a wide range of “pull technologies” (in which the request for data, such as a specific web page, originates with the client) and socially networked modes of music discovery, the extent to which formatted radio had theretofore constrained their musical experiences.

Thus radio broadcasting’s eighty-year history as a one-to-many, time-based medium, and its thirty-year history as a push-based provider of narrowly formatted programming (pushed at the client by the industry), cast a powerful shadow on both traditional and satellite broadcasters’ ability to recognize the threat from new media technologies. Believing they understood the medium and the audience, the question broadcasters asked themselves was whether enough listeners would pay for radio to make direct satellite radio profitable, when the longer-term challenge was whether these time-honored models were still viable at all. The recording industry, for its part, was in no mood to support satellite radio, fearing that the increased sound quality and lossless reproducibility of digital signals would lead to illicit recording and distribution of music (fears that appeared to be realized when XM began incorporating recording capabilities into its receivers, leading the Recording Industry of America [RIAA] to file suit in 2006).<sup>63</sup> It is telling that XM and Sirius executives repeatedly described their competition as terrestrial radio, CDs, and cassettes, all but ignoring the shift to hyperpersonalized, portable musical choice represented by digital media players, most formidably the Apple iPod (released just a month after XM began its service in 2001). Although both companies offered a substantial amount of content unavailable on either terrestrial radio or portable digital media players, such as live sports or popular programming like Stern’s show, their primary model of pushing narrowly segmented content streams remained vulnerable to the new possibilities of MP3 music and podcasts: privatized, mobile, and increasingly embedded in social relations that bypassed the mechanisms of taste production perfected by what Yochai Benkler calls the “industrial information economy.”<sup>64</sup>

One more legacy of terrestrial radio returned to help shape SDARS: the turn to localism. Initially, as discussed earlier in this chapter, it was the terrestrial broadcasters who made an issue of satellite radio’s provision of local content. Noting XM’s and Sirius’s use of terrestrial repeaters to augment the satellite signal and maximize coverage, especially in urban areas, the NAB darkly warned of a satellite conspiracy to take over local as well as national radio. As NAB president Eddie Fritts put it in 2001, “The time for subterfuge is over. These companies must come clean with regulators and the American people on their true intentions. . . . If XM and Sirius want to provide a

traditional over-the-air radio service, they should apply for over-the-air licenses like everyone else.”<sup>65</sup> While the NAB’s rhetoric may have been overblown, some of these repeaters were indeed in violation of FCC regulations, with at least a third of XM’s 800 terrestrial antennas either placed in unapproved locations or operating above their approved power.<sup>66</sup>

What the NAB really objected to was not the technical violations, nor even the use of local repeaters for the delivery of national content (perhaps suggesting how little respect terrestrial broadcasters had for their own research-driven, consultant-polished national programming); rather, it was XM’s and Sirius’s provision of local content, especially traffic and weather reports, in major markets. Claiming that the 1997 FCC authorization of SDARS had prohibited satcasters from offering such local content, the NAB repeatedly (and unsuccessfully) petitioned the FCC to put a stop to it. The potential hypocrisy inherent in this complaint—after two decades of incorporating satellite-delivered national programming into local radio, terrestrial broadcasters were now complaining about XM and Sirius incorporating terrestrial-delivered local programming into national radio—did not appear to faze broadcasters. The satcasters responded that they were allowed to offer such content as long as they did so nationally: “There is a difference between locally generated broadcasts and local information that happens to be broadcast nationwide,” a spokesman for Sirius claimed, meaning that they could offer New York City traffic reports as long as listeners anywhere in the nation were receiving those reports.<sup>67</sup> Some thirty years after the advent of the satellite radio, the technology still had the power to disrupt notions of the local and the national, even as it continued old patterns of radio programming into a far less certain digital age.

## Conclusion

As of this writing (mid-2009), the long-term future of direct satellite radio broadcasting is in doubt. Burdened by tremendous debt, buffeted by competition from newer technologies, and following extensive lobbying of the FCC and the Department of Justice (for monopoly exemptions), XM and Sirius merged in 2008.<sup>68</sup> In order to achieve economies of scale, Sirius XM pursued a “merged monopoly” strategy under Sirius CEO (and former Infinity Broadcasting chief) Mel Karmazin, slashing its workforce by 22 percent and combining the two services’ programming offerings. In the aftermath of this consolidation, many of the formerly innovative programming strategies that gave deejays creative autonomy were replaced by an emphasis on program “brands” and other hits-based channel formats that featured shallower playlists and smaller music rotations. The high-cost, star-driven channels remained, but the consolidation engendered “mass cancellations” by subscribers who were upset over the loss of their favorite channels.<sup>69</sup> With a



hostile takeover looming, in early 2009 Sirius XM received a cash infusion from Liberty Media, the owner of the DirecTV satellite television service, in exchange for a 40 percent stake. By the end of the first quarter, it reported revenue growth over 2008 and began moving toward more diversified distribution—for example, by offering subscribers streamed content over their cell phones for a small premium.<sup>70</sup> However, the company still faced a debt load of US\$2.3 billion and had lost some 400,000 subscribers, even as plunging car sales weakened one of its most important sources of new customers and increasing music royalty rates promised further hikes in subscription fees in the midst of a severe recession.<sup>71</sup> At the same time, the growing “smart phone” market enabled services like Slacker.com and Pandora to offer not just more preformatted channels than Sirius XM but also user-customized channels, streamed almost anywhere over wi-fi or cell phone networks, at a fraction of the cost of a Sirius XM subscription or even free with advertising.<sup>72</sup>

What these struggles illustrate is that, more than at any time since the 1920s, the very question of what constitutes radio is at stake, and it remains to be seen whether Sirius XM’s answer to that question will be compelling enough to preserve a place for satellites in twenty-first-century “radio.” Throughout its four decades, satellite offered new possibilities for program distribution, but none were so radical as to displace the existing radio models of research-driven formats and nationalized program syndication. Heavily formatted radio stations embraced the economies of scale allowed by satellite distribution in the 1980s, but a decade later switched to high-speed ISDN lines that permitted real-time voice tracking. This allowed one deejay to broadcast to many areas while sounding “local” to each, which further eroded the relationship between radio stations and the geographic area they served. Developments like this have led some observers to suggest that the future of radio might lie in a return to greater localism as a way to offer listeners original content that they cannot find elsewhere.<sup>73</sup> To the extent that radio is integral to the health of local music scenes or might still function to help construct local identities and invigorate local public spheres, a return to radio localism could represent a rebuke to the national formatting strategies in U.S. radio to which satellite distribution was so central. At the same time, the history of satellite radio distribution suggests the ways in which geographically oriented programming can, but does not always, easily mesh with taste-based sound cultures.

In summary, then, while direct satellite broadcasting technology ultimately was able to deliver on its initial promises, the long and costly development cycle prevented satellite radio from establishing itself fully within the media landscape before competing services emerged to threaten it with obsolescence. Moreover, Sirius’s and XM’s reactions to competition involved

recourse to “proven” programming strategies and business models of terrestrial broadcasters (even as those techniques were somewhat beholden to an earlier notion of satellite distribution), making them especially vulnerable to the possibilities of customization and personalization afforded by new technologies of convergence. These programming choices also belied the popular discourses of newness and difference that sought to distinguish satellite from terrestrial radio. Instead of rejecting the claims of these discourses outright, however, it is more productive to view them as rationally foreseeable outcomes of thirty years of satellite radio. Indeed, as the Internet and terrestrial wireless distribution become increasingly central to both audio and video content distribution, it may soon prove that SDARS was in fact the last throes of a much older era of satellite radio, rather than the beginning of a new one.

#### NOTES

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- 18 "RPC IV: Satellites and Syndicators," *Broadcasting*, August 24, 1981, 34–35.
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- 23 See, for example, "Overview: Jockeying for Position in the Marketplace," *Broadcasting*, August 15, 1980, 50.
- 24 Ivan Braiker, quoted in James A. Smith, "Satellites & Syndication: Will It Be Boom or Bust?" *Radio Only*, November 1982, 42.
- 25 "Speaking of and for Radio," *Broadcasting*, April 27, 1981, 62.
- 26 As a McCann Erickson executive rhetorically asked in 1981, "With satellite programs beamed to two hundred or more radio stations, won't the need for local stations lessen? The station's role may be reduced to a carrier of programs." Gene DeWitt, quoted in "2001: Advertising," *Broadcasting*, October 12, 1981, 245. For more on the discourse of radio showmanship going back to the 1930s, see Jennifer Hyland Wang, "Convenient Fictions: The Construction of the Daytime Broadcast Audience, 1927–1960" (Ph.D. diss., University of Wisconsin, 2006).
- 27 Ed Shane, quoted in "The Fickle Business of Formats," *Broadcasting*, August 17, 1981, 60.
- 28 Richard Shibben, quoted in "Freer at Last," *Broadcasting*, January 19, 1981, 33.
- 29 Quoted in "The FCC on the Firing Line in Las Vegas," *Broadcasting*, April 21, 1980, 42.
- 30 "Satnets," *Broadcasting*, April 12, 1982, 73.
- 31 Quoted in "Bullish on Radio and NRBA," *Broadcasting*, April 2, 1984, 46.
- 32 "Satellite? 'Let's Wait and See!'" *Broadcasting*, February 22, 1982, 53–55. Some broadcasters disputed the sonic transparency of satellite distribution. Recalled one deejay, "You could always tell a satellite station by the 'deadness' of the sound; it didn't sound very dynamic because all those triggering tones had to have time to work getting all those elements on the air." John Farrell, e-mail to Bill Kirkpatrick, December 6, 2008.
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