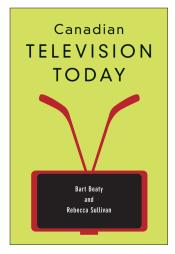


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CHAPTER THREE:

TECHNOLOGY

p to this point we have been exploring television mainly for the contribution that it makes to Canadian culture, but the history and development of Canadian broadcasting has also been inextricably linked to evolving technologies of telecommunications production, distribution, and reception. Various technologies have defined the way that we conceptualize television and the role that it plays in our lives, and in the life of the nation. To understand the dramatic scope of this technological transformation, recall that in 1949 there were only 3,600 television sets in Canadian homes, and no Canadian television stations broadcasting to them (Vipond 1989, 48). Today, Canada has more televisions than it has people, and viewers who subscribe to extended cable or satellite systems have access to channels that number in the hundreds. In moving between these moments in time, broadcasters, regulators, and citizens have negotiated a series of broad changes - the creation of the CBC as a national public broadcasting network, the development of CTV as a second network and second channel in the homes of many Canadians, the conversion to colour televisions, the introduction of cable television in the 1970s and pay television in the 1980s, the birth of satellite broadcasting, and the creation of a broad tier of digital channels, to name but a few. Each of these technological shifts changed the face of Canadian broadcasting as government and industry contended with shifting economic and cultural demands, which often appeared at odds with each other. Critics and scholars who have taken a narrowly technological look at broadcasting have often neglected the actual contexts and conditions for these developments. As a result, television has been conceptualized as something beyond the social, rather than as a medium that has been built in specific ways intended to re-shape Canadian culture and society. The point here is to move beyond the technological determinism that has long characterized the way television has been studied in this country, to consider television less as a "techno-cultural problem" and more as a "textual body" that is technologically mediated (Sconce 2004, 93).

In thinking about television as a technological form, our goal in this chapter is to return technology to the cultural arena. What we mean by this is that television has long functioned in this country in a schizophrenic state. On the one hand, television has been conceptualized as a bearer of culture, carrying a surfeit of images, narratives, and ideas about nation, community, identity, history, and territory. On the other hand, television has also been seen as a vastly sophisticated. ethereal network that transcends territorial boundaries and on which is carried huge capital ventures; therefore its ownership, investment, and control is very much at issue. These two ways of thinking about television are so far divided on a discursive level that even the federal government has chosen to split them apart, leaving Canadian television to serve two very different and at times oppositional masters. Bram Abramson and Marc Raboy detail a lengthy and convoluted series of governmental policy shifts in telecommunications during the mid-1990s that led to the closing of the Department of Communication. which had jurisdiction over all aspects of television. In its place, the newly formed Department of Canadian Heritage received control over television's cultural role: programming and production funding, the CRTC, the CBC. Its mandate is to foster the medium in ways that support Canada's official cultural policies of multiculturalism and bilingualism. Meanwhile, the actual telecommunication network is overseen by Industry Canada with the goal of fostering a knowledge-based economy and information society, to use two of the more popular buzzwords of the day (1999, 778).

The importance of this split to the development and future direction of Canadian television is at least twofold. In the first instance,

television's role as a medium of culture has been hived off from the forces that actually build, control, and profit from it. That means that television is treated as a public forum, but one that primarily serves privatized corporate interests. This becomes increasingly obvious when the CRTC opts for protectionist measures like simultaneous substitution whose primary goal is the protection of a private industry, and which only provides trickle-down benefits to artists and audiences. At stake, then, is the consideration of television as a form of, or at least a conduit for, the public sphere. This idea, first conceptualized by Jürgen Habermas in his classic book The Structural Transformation of the Public Sphere (1991), can be briefly summarized as a social space in which perpetually ongoing public debate by private citizens can take place on the grounds of reason and logical disputation. Every individual is welcome to contribute, with the only criteria for involvement being that of having a well-thought-out argument. According to Habermas, the realm of communicative action is the lifeblood of any society, the place where ideas flourish and democracy becomes real. However, it has been mitigated by the development of private capital, the deadening realm in which money trumps ideas and discourse revolves around the consolidation of power, rather than the spread of democracy. This realm of money/power is not part of the public sphere but offers in its place a notion of representative publicity, of spectacle masquerading as discourse, and ritualistic consumption replacing productive communicative action (Calhoun 1994, 2-7).

For many, television fits within this category of representative publicity, an unconvincing replacement for a truly democratic, participatory society. Yet this disdain for the spectacle and the privileging of the literal, in which public talk is conceptualized as a good, while public display is not, can be seen as a flaw in Habermas's utopian vision. As scholars such as Nancy Fraser (1994) and Michael Warner (1994) have pointed out, this hierarchical formulation doubly marginalizes individuals who have already been placed outside the public sphere because of limits on their education, political, or economic rights, and who have historically sought access to public debates through the back doors of consumption. What is most interesting about this turn of events is the way that the visual and public display have in essence

challenged the idea of reason as a state of mind, separated from the body (Warner 1994, 385). This means that rather than erasing markers of gender, racial, ethnic, linguistic, class, and cultural differences, which Habermas's public sphere of discourse is supposed to do, a visually oriented public sphere has the potential to render the notion of difference concrete, tangible, and very much a part of the lifeworld of communicative action. In that sense, then, television continues to hold out enormous promise within a framework of the public sphere conceived not as holistic, uniform, and homogenous, but as replete with a dazzling array of disjunctural bodies carrying with them an influx of forms of cultural differences. It is our contention that the cultural needs of television in a globalized environment of disjuncture and difference, to again borrow Appadurai's terms, have caused television technologies to mutate from a single, mass broadcasting system to a plethora of different forms, conduits, carriers, and networks that can better serve its fractured audience. This polymorphous network is often at odds with the economic imperatives of the unified, all-encompassing telecommunications infrastructure as it is currently managed by major corporate and governmental interests, and which has placed business interests before the audience.

Another consequence of the separation of television culture and television technology has been the fact that economic managers and cultural managers often have very different agendas. As we have demonstrated in the previous chapters, television's placement within the Department of Heritage portfolio has rendered its cultural goals inward-looking and nationalistic. Yet, the care of the infrastructure, which is the responsibility of Industry Canada, has been far more concerned with positioning Canadian television and telecommunications within an ever-expanding global market economy that is technologically driven. In this sense, then, the division of television culture from television technology is connected to concerns over the so-called information society that is increasingly an economic, rather than political, imperative. Abramson and Raboy make a convincing case that Canada's telecommunication policy, as opposed to its television cultural policy, has been accelerating its global focus since the 1988 Free Trade Agreement with the United States. Furthermore, it has done so based not on political arguments of "domestic necessity" but on economic ones of "commercial indispensability" (1999, 781). As a result of this imposed divorce between culture and technology, the "domestic necessity" argument has been taken over and reconfigured by cultural nationalists who insist first on a necessary and obvious link between political and cultural identity, and then use that as justification for greater regulatory protectionism with the argument that Canada's cultural survival is at stake (Collins 1990, 18). Nonetheless, the reality is that this is very much an inward-looking form of protection. The process is one that is concerned with protecting Canadians from themselves and their own debased tastes, and it has led to the sort of homogenous nationalism that limits the potential of television to mediate multiculturalism and helps generate a public sphere based on disjuncture and difference.

By contrast, telecommunication policies have increasingly undermined this kind of protectionism by integrating Canadian networks into a vast, global infrastructure in which capital flows freely, unmoored from domestic cultural or political concerns. The problem here is that separating television culture from television technology neglects to take into account genuinely important political concerns about identity and forms of difference. The commercialization of broadcasting, its value within the realm of money/power, means that the same kind of homogenizing tendencies that occur within national identity debates are likely to take place in the name of competition and constantly accelerating expansion, only on a global-economic instead of national-political scale. In other words, keeping culture and technology separate preserves a sense of defensive homogeneity for both projects while each provides justification for the other. Importantly, in both cases, they rely on a perceived threat of American cultural encroachment and domination. Yet, it was a technological decision made almost at the beginning of television that forever tied Canada's telecommunications infrastructure to that of the United States.

TELEVISION AND TELECOMMUNICATIONS

The long-term implications of technological change are not always apparent at the moment that important decisions about technologies are made, but it is clear that once they are made it is extremely difficult, if not impossible, to put the genie back in the bottle. Indeed, the most important decision about Canadian television appears natural and obvious in retrospect, but, had it been otherwise decided, would have dramatically transformed the history of Canadian television. Canada, like much of the Americas and Japan, broadcasts television according to the National Television Systems Committee (NTSC) standard. This standard, adopted by the American Federal Communications Commission (FCC) in 1941 to resolve the conflict that had arisen about a national analog television system in that country, differs from that used in Europe, Africa, and much of Asia. Because the system was utilized by the United States, whose entry into television broadcasting predated the first Canadian stations by several years, it seemed logical that Canada should use the system of its only neighbour. Nonetheless, had Canada adopted another system, such as the one used by Great Britain, for example, and barred the sale of NTSC-capable televisions to Canadians in the same way that efforts are now made to criminalize the reception of non-licensed foreign satellite signals, Canada could have shut the door on American broadcasters at the moment of television's inception. A decision such as this one would have meant that the Canadian television industry would have had the opportunity to develop along a completely different trajectory than it ultimately did.

Of course, had this been the case, it is just as likely that many Canadians living close to the American border, a majority of the population, and within signal range of American over-the-air analog broadcasters, would have chosen to circumvent the government by purchasing American televisions rather than Canadian ones. The grey market would have developed earlier in the history of Canadian broadcasting, and the end result may have been the same. It is impossible to know, since Canada entwined its broadcasting system with that of the United States from the time that the first stations were launched in 1952. The result of that decision is that important technological debates, such

as those surrounding the introduction of cable and satellite systems, have revolved around the autonomy of the Canadian broadcasting system, and the perception that it is threatened by an American system into which we deliberately integrated ourselves, first out of a sense of domestic necessity (Canada has too few people over too much territory to effectively run its own system, better that it share); but now is most definitely argued on terms of commercial indispensability (viewer choice, technological expansion, free market competition). History appears to be repeating itself in discussions about the introduction of high definition television (HDTV) into Canada, in which the CRTC again chose to follow the lead of the FCC and American private broadcasters, rather than opt for a distinctly Canadian form of digital delivery.

At the same time, however, new technologies are redefining television viewing for millions of Canadians and undermining both political and cultural arguments for a protected national industry and an economic and technological infrastructure that is based on perpetually enlarged profits. Instead, these technologies are changing the parameters of the telecommunications infrastructure, opening up alternative markets and creating new audiences who are managing the flow of television for themselves, not just sitting back and letting the broadcasters do it for them. In that sense, they are responding to the ideological imperatives of the ethnoscape in which the constant flux of people, culture, and ideas necessitates new forms of media connectivity. Rather than a passive, mass medium system, television has become an increasingly interactive process as audiences select not only what they'll watch, but when and how. Interestingly, the three most common of these user-based technologies, the DVD, the digital video recorder (DVR), and peer-to-peer file-sharing (P2P), have been little remarked upon by the CRTC, even though they effectively re-route the flow of television in ways that significantly undermine regulatory strategies of cultural protection. Ironically, much more than HDTV, these three technologies have the possibility of reshaping Canadian television because of the way that they call into question the longstanding tradition of advertising-supported broadcasting. Yet HDTV is the only one receiving the attention of the CRTC, mostly because

of its links to the American broadcasting industry that has quickly adopted the technology. Even though it generally frames its decisions with regard to their impact on national identity, the CRTC has seemingly overlooked the more serious challenge to the traditional model of television that is now possible through technologies that bypass the regulated broadcasting system.

It is important to point out that what is really threatened by the rise of new television technologies is the traditional model of dramatic programming, rather than the model for information programming like news and sports. This has to do with the way that audiences watch television for different purposes. In the case of information programming, the immediacy of live coverage keeps it secured within a traditional broadcasting model. When ones misses watching The National on any particular evening, the likelihood of downloading the show rather than just turning to the CBC's news website, or buying a newspaper, or waiting to catch up on the news the next day, are not very high. However, when one misses the season finale of Canadian Idol, the possibility of accessing it on one of many freestanding P2P services would be very tempting. Yet, as was explored in the previous chapter, dramatic programming is the cornerstone of cultural nationalist arguments in favour of a protected national television sector that is structured around the deliberate imposition of limits on audience choice that will ensure a semi-captive market. However, if Canadians continue to access dramatic programming through means other than conventional broadcasting, then the traditional broadcasting model can be seen to be on its last legs, and it will be time to figure out how to replace it. Before deciding that this means a triumph of the economic model for television supported by a freewheeling technological infrastructure, it should be pointed out that very similar concerns about television technology finding its way into the hands of the consumer echo in the hallways of Industry Canada.

New technologies that make television programming available to viewers when they want it rather than when it is best suited for networks have the potential to dramatically restructure the television experience so that the one-way flow of broadcaster to audience is permanently disrupted and sent bouncing through the mediascape. The

reason for this is that the one-way flow model is based almost exclusively on the idea of a captive audience who is sold television in return for selling itself back to advertisers. Advertising-based television is so central to the television experience in Canada that it is sometimes difficult to recall that other models could have been just as easily developed. Alternate models of television broadcasting include the public, advertising-free model (such as America's PBS or the original model of the UK's BBC); the subscription-based model (such as Movie Central, and other channels dedicated to showing uncut films); or a modified ad-based model in which commercials are shown only before and after programs (as is common in Europe). Each of these models brings a different dynamic to television viewing and, consequently, television production.

There are a number of advantages and disadvantages that apply to the normative ad-based broadcasting model used by CBC, CTV, Global, and the major American networks. The most obvious advantage involves cost. Once a television has been purchased, viewers, at least those in major urban centres, can receive a variety of television channels over the air, at no additional cost. This model has remained more or less in place since the days of analog reception, although it has been adapted into a subscriber service for cable and satellite providers. Still, the experience of television tends to be something that is practically free and always available, and national and local advertising interspersed throughout the show supports the programming on these channels. A second advantage lies in the fact that adbased models of television require no public funding and, therefore, channel offerings are governed primarily through a market system. Theoretically, an infinite number of ad-supported television channels are possible, if the advertising pool is large enough to support them. Third, ad-based television, because it seeks the largest possible audiences, focuses primarily on the popular, rather than on an externally defined value system that privileges socially ameliorative broadcasting. Unpopular programs, or programs that do not develop large audiences, are often quickly taken off the air. The fact that this applies to many Canadian programs cannot be overlooked. Indeed, the range of television production is limited by a need to please advertisers, and explicitly uncommercial, or anti-commercial, programs rarely make it to air except on the partially publicly funded CBC. A solely advertising-driven model claims only that the public chooses and the networks provide what people want, or what they believe a large number of people will want. This is why cable and broadcasting companies routinely invoke the rhetoric of choice for their audience, not because they really care about what they want from television, but because they are the ultimate commodity being sold to the companies who pay them and therefore keep the privatized, capitalist system of broadcasting going. However, if new technologies ratchet up choice in ways that completely bypass the broadcasting infrastructure, then business starts to falter and everyone, cultural nationalists and free market venture capitalists alike, is left scrambling.

For viewers inundated with ever-increasing numbers of television advertisements, commercials are increasingly regarded as an unnecessary irritant. Now that government regulators have given Canadian broadcasters even more ad-time per hour than their American counterparts, this problem is likely to get even worse. The CRTC's Canadian content proposal from December 2004 recommended expanding the advertising allotment in order to subsidize Canadian program content. It even proposed allowing fifteen-second mini-commercials on community access stations, under the banner of "sponsorship." Yet this decision occurred at a time when viewers have far more technological options to eliminate advertising altogether. What is at stake are competing conceptions of the way that television should be experienced and whether broadcasting as a medium will continue to dominate economically and culturally over other information and entertainment technologies. For Canadian broadcasters, the key is to keep viewers watching their stations in order to sell more advertising and at higher prices, which will in turn drive profits. For these broadcasters, technologies that permit time-shifting and ad deletion are enormous threats. For viewers, on the other hand, the ability to watch a program when it is most convenient, and to save time by eliminating the superfluous and unwanted portions of a broadcast (the ads), is taking precedence over any expectations of loyalty to a channel or even the system as it currently exists. As the CRTC moves to boost the amount of advertising permitted in an hour from twelve to fourteen minutes, it is clear that new technologies have pushed the traditional broadcast model to the tipping point. Ultimately, a variety of new technologies offer the potential to radically restructure the television experience. The implications are not only for industry, however. At stake is television's role as a cultural medium that can be controlled to serve narrowly defined, homogenous nationalist interests.

Many cultural commentators have derided the fact that commercial television regularly sinks to the lowest common denominator in its quest to maximize ratings, and that much of what airs is crassly exploitative and diminishes civic discourse. This is the argument most often deployed in denying the possibility of television as a medium for communicative action, and proving that it is little more than cheap spectacle. It is, really, a typical elitist critique of low culture based on the presumption that popularity denotes poor quality, and discussions about the latest life lesson for Bubbles, the idiot savant of Trailer Park Boys, are simply not valuable or socially redeeming in any way. Yet, others would argue that this is precisely the level at which culture is created and a sense of shared discursive ground can be established. However, both sides of this argument are compromised by the technological explosion on television that has fragmented the audience far beyond traditional conceptions of the mass. This has led to concerns that TV can no longer serve a nation-building role of common cultural experience at either the middlebrow level of ennobling and edifying culture or the lowbrow level of mass entertainment. Thus, the desire for a tightly controlled, homogenous audience with limited choice serves both a cultural argument for elite nationalist programming and the economic argument for maintaining a captive, manageable audience for maximized profit. The telecommunications infrastructure has been, therefore, developed along strictly homogenous lines that keep the audience in check. However, the industrial goal for ever-accelerating expansion has at this juncture in history created the conditions for its own undoing and given the audience a new level of control not just over shows and programming, but even over the airwaves themselves.

THE DIGITAL VIDEO RECORDER

Although only recently available in the Canadian market, the digital video recorder (DVR), of which TiVo is the best-known model, has significantly recalibrated the relationship of Canadian viewers to television. TiVo fan sites on the internet are overrun by consumer testimonials of the type that insist "TiVo changed my life," and even the staid New York Times headlined an article "How Do I Love Thee, TiVo?," which featured proclamations about how TiVo allowed teenagers to develop better sleeping, exercise, and eating habits by becoming better time managers (Taub 2004). The primary attractions of the digital video recorder are the ability to set the machine to record shows in a more intuitive and user-friendly manner than is possible with VCRs. a large hard drive to store huge amounts of recorded programming indefinitely, features that allow the user to pause and replay live television, and the ability to efficiently fast forward through commercial interruptions. Refinements in DVR technologies have even enabled the machine to "recommend" programming to audiences by keying in on certain viewer tendencies and linking to similarly themed shows. All in all, the promise of the DVR is the ability to create a highly personalized flow of television that exists without reference to traditional concepts such as networks, primetime schedules, or advertising. The situation is fast becoming acute. In a USA Today article, it was reported that in households that own a DVR, primetime viewing has dropped by 50 per cent. In the case of the 18–44 demographic, the most highly prized by advertisers, more than 60 per cent of DVR owners polled no longer watch their favourite shows in real time (Oldenburg 2005).

Thus far, the technology has been adopted by only a small minority of households, with 3.5 million devices sold in the United States to 108 million possible households in 2004, and projections for that to rise to 33.5 million by 2008, which is still only about one third the number of households which own a VCR (Oldenburg 2005). Currently, Canada lags significantly behind the United States in adoption of DVR technologies, primarily because industry leaders TiVo and ReplayTV were not initially made available in Canada. It was only in 2004 that cable companies rolled out multi-functional DVR digital cable boxes,

and satellite services quickly followed suit. The reasons for Canada's sluggish and half-hearted move into this market are unclear. Perhaps it is simply the usual complaint against an industry that has grown lazy over generations of protective regulations and an overall lack of entrepreneurialism. Or it is the middlebrow anxiety that dismisses television as consumerist drivel and assumes audiences would be loath to take a more activist role in how they watch, as if admitting that they hate to miss an episode of *Desperate Housewives* or they're too tired to stay up late and watch *The Daily Show* would expose them to derision.

No matter the reasons why DVR technology has been very slowly adopted in Canada, it cannot be denied that while VCRs always carried with them the possibility of time-shifting television programs and fast-forwarding through commercials, the ease of use of the DVR has alarmed broadcasters and troubled the traditional broadcast model. The centrality of advertising on contemporary television means that the primary, and in many cases only, revenue source for broadcasters is advertisements. If advertisers begin to feel that viewers have stopped watching ads altogether, the very basis of commercial television is threatened. This possibility was suggested by Jamie Kellner, chairman of Turner Broadcasting, when he told CableWorld magazine that viewers who don't watch commercials during television shows are "stealing" from the networks: "Your contract with the network when you get the show is you're going to watch the spots. Otherwise you couldn't get the show on an ad-supported basis. Any time you skip a commercial or push the button you're actually stealing the programming" (Kramer 2002). While some might dismiss this kind of alarmist comments as akin to Jack Valenti's suggestion that the VCR would topple the movie industry, it is clear that they represent a real concern on the part of broadcasters. In November 2004, the United States House of Representatives debated HR2391, the Intellectual Property Protection Act. This act, which would have made users of peer-to-peer file-sharing networks criminally liable for copyright infringement, included a provision that would have criminalized fast-forwarding through commercials in television programs and through the ads at the beginning of DVDs (Grebb 2004). Although these provisions were ultimately

removed from the bill that was passed by the House, the very fact that the criminalization of a practice that has been widespread for more than twenty years and that would be virtually impossible to police without a gross invasion of privacy indicates how new technologies have the power to disturb existing understandings about the way that television works.

Ultimately, of course, the \$60 billion per year advertising industry is hardly going to disappear simply because DVRs make ad-skipping easier. Indeed, TiVo itself, under pressure from networks, began inserting "billboard" ads that pop up on the screen as a viewer fast-forwards through commercials, replacing one form of advertising for another. Further, many shows have increasingly returned to an earlier model of advertising, incorporating ads directly into the content of popular shows. So, just as Bob Hope or Jack Benny once performed in the ads on their shows, contestants on Survivor now play for prizes of "cool, refreshing Mountain Dew," and American Idol has their performers participate in music videos that push advertisers' wares. The threat to advertisers, it seems, can be alleviated to a degree by their own willingness to adapt and innovate, which has often been the hallmark of the ad industry generally. As a result, there has been a softening of their stance against DVRs by the major American networks, at least. According to recent surveys, the use of DVRs is turning television viewers into discerning audiences for commercials by fast-forwarding and then rewinding back if an ad catches their eye (Gershberg 2005). The real threat posed by DVRs, therefore, is not to advertising brands. but to the branding of the networks altogether. The DVR increasingly promises to make the idea of the network, and its carefully crafted schedule, irrelevant. While networks have spent years and millions of dollars creating particular brand identities for themselves, the DVR makes those identities inconsequential. If a viewer wants to watch Corner Gas, it makes little difference what channel the show appears on or when, once the DVR has been instructed to record it whenever a new episode airs. The traditional notion of the flow of television, in which network programmers attempt to create an evening-long block of programming that will keep viewers from moving to another channel, with one show flowing into the next in a logical and progressive

fashion, is the one that is most disrupted by the DVR. When television becomes a smorgasbord rather than a fixed menu, it becomes harder for networks to build a loyal and reliable audience that they can then sell to advertisers.

Networks have begun battling this tendency by using programming tricks to thwart users of DVRs. Thus, for example, in 2004 ABC routinely extended the ending of popular shows like Lost and Desperate Housewives slightly past the hour. This meant that any recording technology would miss the final moments of an episode unless owners manually override the system. The situation was so pronounced that TiVo sent notices to their users informing them of ABC's policy so that they could adjust accordingly. ABC's scheduling chief, Jeff Bader, was unapologetic: "It's not my job to make it easy for people to leave our network. Our whole goal is to get people to stay with us from 8 to 11" (Levin 2004). Bader's desire to hold viewers captive through punitive tactics is at odds with the usual claims of private broadcasters that their goal is to serve the audience through limited models of viewer choice. While non-standard start and end times might irritate some viewers into watching shows live, it is not likely to be a winning long-term strategy. Further, as the utility of the television network as a distinct entity decreases, an emphasis on individual shows will only increase. It is this issue that may have the greatest repercussions for Canadian television, which has traditionally faltered in creating any content that defines a nationalist ethos and has instead relied on the telecommunications system itself. It is, as Maurice Charland and Will Straw both argue, a decidedly technological model of nationalist broadcasting minus any "semantic and emotional glue" (Straw 2002, 106). This may leave the country more vulnerable than others to increasing technological changes because the highly advanced technological infrastructure has been a fact of Canadian cultural and economic life. When it comes to broadcasting, Canada has one of the most advanced systems in the world and has quickly adopted digital and satellite technology to expand that system even further. With so much of the nationalist myth bound to metaphors of technological connection across vast territory, from the railroad to the CBC, the anxiety produced when these technologies begin to shatter that sense of territory is difficult to assuage. The reliance on the technology to produce connections while content languishes appears unchanging. Canadian television shows still suffer from lack of exposure and the market is once again missing out on new forms of distribution that bypass the telecommunication infrastructure in favour of models that privilege recording technologies.

THE DVD PLAYER

An important shift in the technological landscape of contemporary television is the marketing of television shows, both old and new, directly to consumers as DVDs. The importance of this new market was highlighted in April 2004, when the final episode of Friends was released on DVD five days after it was first broadcast on NBC. The short lead between initial broadcast and commercial release suggests that the old model of network television, in which the show appears only once before semi-permanently disappearing into the ether and only to re-emerge in syndication at a time and place virtually unknown to the viewer, is rapidly drawing to a close. In 2003 and 2004, the drive to release television shows on DVD took on added significance for the economics of the television industry, as DVD sales of television programs increased significantly. Through the first nine months of 2004, 470 television shows were released on DVD, up from 440 through the same period the year prior, with multi-disc sets increasing by 77 per cent. These releases accounted for more than US\$2 billion in sales. an increase of more than 33 per cent from 2003. Further, analysts for Merrill Lynch estimated a 30 per cent annual growth in the area of television DVDs through 2008, with sales reaching US\$3.9 billion at that time (Snider 2004a). Because the cost of a television show's production has been financed by its initial run and subsequent rebroadcasts, DVD sales are close to pure profits for television studios. The discs are inexpensive to manufacture, giving studios as much as \$8 to \$30 profit on every season-length DVD set sold to consumers. Hit shows on DVD, such as Comedy Central's *Chappelle's Show*, which sold more than two million copies in 2004, generate tens of millions of dollars worth of revenue in the DVD format. They also, as in this example, serve to generate buzz among audiences who may have missed the show on its first release, and shore up its regular network success for following seasons. When even shows with limited or nostalgic appeal, such as *What's Happening!!* (ABC 1976–79) sell more than 100,000 copies (Snider 2004b), the incentives for studios to migrate television to DVD is clear.

The creation of the DVD-watching audience, as opposed to the broadcasting audience, has a number of major consequences for television already troubled by the DVR market. In essence, it takes the audience completely out of the existing technological infrastructure and its corresponding economic model for sustainability. As noted before, broadcasters are responding to the use of DVRs by surreptitiously slipping in advertising into the regular show, either through product placement or through the less smooth insertion of pop up advertisements in the middle of a show. These digitally originated graphics, or DOGs as they're called, have become a mainstay of networks like Global who use them to advertise pizza and other entirely nonsensical products in the midst of their most popular shows. It is a particularly obnoxious practice that says much about the industry's contempt for its audience and for the medium itself. No one would expect an ad to suddenly dance across the screen at the local Cineplex; such an invasion into the dramatic experience of watching a film would be considered tacky and utterly disrespectful to the artistic creation. However, television apparently has no such high standards in the eyes of those who make a living from it, and the ease with which broadcasters disrupt a show to shill on behalf of their advertisers says much about how television is seen as a content-irrelevant medium. DVD television packages, by contrast, have elevated the medium in very interesting and sophisticated ways, by taking programming out of a matrix of passive flow and treating shows the same way that prestige film or music would be. The presumption of the DVD market for television is that viewers actually see value – critical, cultural, or artistic – in the medium and are seeking a more visceral, immediate, and active experience than networks allow. It is also true that DVDs tend to have higher visual and sound quality, include many additional features not available on regular broadcast, and when, where, and how much to watch are all issues entirely at the discretion of the purchaser. All these features effectively take the cultural product of television out of the hands of the broadcasters and cable companies and put it into the hands of the audience.

Another consequence of the DVD market is the way that it makes television programming collectible in a manner that was largely absent in the past. While some popular or cult-like television shows, such as Star Trek, were previously available on home video in greatest hit collections, these were very much the exception rather than the norm. Given the aggressive manner in which American television studios have been mining their back catalogue, however, it is increasingly likely that popular and unpopular shows alike will become available to viewers. In the contemporary market, broadcasts that might have been ephemeral have been given new life. For example, the November 2003 Heritage Classic hockey game played by the Edmonton Oilers and the Montreal Canadiens outdoors at Commonwealth Stadium was quickly released by the NHL and Warner Home Video. The idea of releasing special event hockey games on DVD - the 2004 Olympic gold medal hockey games featuring the Canadian men's and women's teams as well as the legendary Canada-Russia series of 1972 have also been released - would have been inconceivable prior to the shift towards television on DVD. Thus, some television programs can be turned into major cultural events only after the initial broadcast. They are commemorated by being inserted into the economy as collectibles, rather than persisting merely as tightly controlled archival footage, or as a cultural memory of viewers. It is a unique new way of recycling what Will Straw has called "cultural waste," products which outlived their cultural usefulness but then find themselves circulating in new ways, most notably as collector items (2000, 176). In essence, the DVD revolution in television has displaced a longstanding model of consuming culture and replaced it with one that puts the onus on the consumer

as an active, participatory member in a discursive lifeworld that had previously been dismissed as non-communicative, non-participatory, and merely representative of culture but not really culture itself.

The increasingly widespread availability of older television programming on DVD erodes one of the important functions of television in recirculating old material. The rerun has been a central part of the television schedule for decades, and many local channels fill nonprimetime hours with reruns of popular sitcoms and dramas. With the rapid expansion of channels in the world of satellite and digital cable, entire channels have sprung up catering exclusively to fans of old television programs, and many smaller networks like Comedy Central or Teletoon rely on syndication to fill programming gaps cheaply. The ability of television to recycle its own past, and thereby survive with less original programming, may be curtailed by the DVD revolution. This has profound implications for the ways that networks manage their seasons. Usually, a major network show is scheduled to air twenty-two original episodes over a nine-month period from September to May. That means over three months of the schedule will have to be filled with reruns, special programs, and other filler material. Since the ratings system uses a "sweeps" method in which extensive data is only gathered during the months of November, February, May, and August, networks save up their best material for concentrated bursts and then original programming all but disappears for a long time, often shedding loyal audience along the way. A New York Times article from February 2004 highlighted decisions by American networks to downplay reruns in an effort to staunch audience erosion. The networks planned to combat the loss of audience by ending their reliance on the thirty-five-week September to May television season, and by developing increasing numbers of series intended to run for fewer than twenty-two episodes, like The Apprentice or The Simple Life, that could be shown in bursts of eight to thirteen weeks to maintain viewer momentum. Significantly, these short run shows are also more saleable on DVD as they are less expensive to produce than a series running twenty-two hours or more and have the potential to further erode, rather than bolster, the audience for network television.

Nonetheless, while it is clear that networks are losing viewers to DVD, there also exists a significant reciprocal effect between the two forms. This was best demonstrated in September 2002, when Fox Television took the then unusual step of offering the complete first season of 24 on DVD just two weeks before the second season was to debut. This strategy to attract a new audience for the critically acclaimed, but little-watched, show seems to have worked, and the ratings for the second season debut were higher than those for the first season (Snider 2004b). Similar efforts to bolster the fortunes of acclaimed but neglected shows followed, including Fox's Arrested Development and CTV's Corner Gas in the fall of 2004. An even stronger case is offered by The Family Guy, the animated show that originally aired on Fox from 1999 through 2002. After the show was cancelled, it became a hit on DVD, finding a large new audience. The show's subsequent success on Comedy Network in the United States and Teletoon in Canada, coupled with the DVD sales, convinced Fox to resume production of the show, which returned to Fox with new episodes in 2005, after a three-year absence. The Family Guy, therefore, became the first television show to be produced primarily for the DVD market, with new episodes airing as a form of loss leader for the eventual collections. It is highly possible that this could be the new model of television production in a very short period of time.

However, if DVDs do take the place of network broadcasts as the viewing model of choice, Canadian television is not particularly well situated to capitalize on the development. Canadian television remains woefully unavailable on DVD by the contemporary standards of the form. When the 2004 Gemini awards were announced, the big winner, Human Cargo, was not available on DVD, nor was the Best Drama winner, Da Vinci's Inquest. Interestingly, the exception to this was Trailer Park Boys, which had the first two seasons available in one set, adding to its cult success. Producers are becoming more attuned to the DVD market. 2005's Gemini winner, Sex Traffic, was released on DVD in Canada in January 2006, around the time of the awards show. CBC seems particularly slow to release DVDs. By 2004, popular programs such as The Newsroom, Made in Canada, and Degrassi Junior High had only their first seasons available, and at considerably

higher prices than American dramatic series. Despite the fact that the DVD release of Corner Gas did well enough to help boost the ratings for the second season, CTV has not tried to capitalize on the nostalgia market. 2004 saw the first collections of old sketch comedy classics SCTV and The Kids in the Hall, but in the American editions of the show, rather than the Canadian, and again at prohibitively high prices. And Canadian television producers have been particularly slow to release classic shows from the vault, such as The Beachcombers. It is clear, therefore, that Canadian television producers have been dragging their feet over providing material to the public, as if there is a fear that if the content takes precedence over the infrastructure the entire system may collapse. At the same time, Canadians have adopted DVD technology at a rapid rate. In 2004, Statscan reported that more than half of all Canadian households owned a DVD player, up from onethird in 2003 (Moore 2004). With so little Canadian content available to serve this growing market and at competitive costs, it seems that once again the Canadian television industry is deliberately ceding ground to American companies.

The Canadian reluctance to enter into the DVD market fails to make sense particularly when the issue of multiculturalism and foreign-language television penetration is addressed. One problem for DVD aficionados has been that different countries, in an effort to maintain staggered release dates or to protect the possibility of overseas network sales, have established regional settings intended to make it impossible to play a DVD from one country in a region with a different code. However, as is so often the case, these encryption codes were quickly broken and inexpensive region-free DVD players are now readily available. Importantly, it was the immigrant Asian community who largely spearheaded the region-free DVD market in order to make Pacific Rim film and television easily available to diasporic audiences. Most Asian shopping centres across Canada now have a steady stream of consumers in their video stores. What is most interesting is how this underground market has attracted a non-Asian community who are just as likely to purchase a \$6 copy of the latest Hong Kong action film as wait patiently for it to be released in cinemas. Other immigrant communities have followed suit, importing a wide range of film, dramatic, and variety programming from their home countries in order to compensate for the failures of the Canadian broadcasting system to properly serve its multicultural mandate.

Just as with grey market news and sports programming, pirated DVDs are the last resort of immigrant populations who are otherwise denied access to their own cultural programming. Unfortunately, in the face of mounting pressure from the United States to fall in line with its copyright laws, Canadian officials responded in May 2005 with a showy raid of a suburban Toronto mall catering to the Asian community. A Toronto Star article on the raid spoke exclusively with police and legal experts on the issue, asking none of the people involved with the buying and selling of these DVDs if there are reasons other than price that account for this widespread cultural practice (Prashad 2005). What is most noteworthy about the raid is the way that, as with Bill C-2 and the attempt to regulate the grey market satellite industry, Canadian police agencies have specifically targeted the choices of ethnic minorities in this country in an effort to criminalize access to non-hegemonic cultural choices. Increasingly, the expansion of online DVD shopping has meant that television from around the world is now literally a few clicks away, and out of the hands of legislators who want to police Canada's cultural borders, and the international DVD market is expanding the scope of television from a closely monitored national experience to a much more diverse global one. The success of the British cult show The Office, which aired in Canada on the lowpenetration specialty digital service BBC Canada but took off as a bestselling DVD set, highlights the way that DVDs allow television shows to bypass traditional systems and reach diverse audiences.

At this point, DVD technology does not need to be seen as a direct threat to television because it is still an alternative form of revenue. As in the case of *Corner Gas* or *Trailer Park Boys*, two of a very small smattering of Canadian DVD television successes, they can actually augment or enhance audience for regular broadcasts of popular shows, in essence giving them a second or even third life which might serve the increasingly worldwide Canadian diaspora. In that sense, then, the cries to clamp down on foreign-market DVD circulation seem rather shortsighted and hollow, in that they fail to recognize how important

television is to sustaining cultures which are increasingly in flux as they move erratically around the globe. It is in this sense that the consumer-oriented representative publicity of television does offer a back door to the Canadian public sphere for groups marginalized from the centre of national identity formation and relegated as multicultural. Its existence as spectacle also attracts audiences from outside the narrow confines of ethnic communities and, unlike foreign-language television stations, the DVD market has quickly learned that the inclusion of multiple-language subtitles will lead to larger audiences. Clearly, then, DVD has the potential to shift the medium of television as a controllable technology in which audiences are dependent on the decisions of broadcasters, regulators, and service providers and organized into discrete national, ethnic, and linguistic audiences.

PEER-TO-PEER NETWORK FILE-SHARING

Not only is the internet a growing resource for international DVD sales, it is also fast becoming a clearing house for digital video files. The increasing availability of television programming online is a prospect with far graver implications for broadcasters. Its ubiquity was driven home in the traditional press in October 2004, when comedian and talk-show host Jon Stewart appeared on CNN's debate show, *Crossfire*. Stewart launched into an unprecedented attack on the show and its hosts, referring to them as "hacks" whose program was harmful to American democracy. The episode aired on a Friday night, and instantly became a major topic of discussion on political and media-oriented blogs in the weeks before the American election. Four days later, the thirteen-minute clip of the show had been downloaded 670,000 times from iFilm.com, over 50,000 more than the average number of viewers who watch *Crossfire* on television (Hines 2004). In the weeks that followed, 2.3 million people downloaded the file from iFilm.com

(C. Thompson 2005). This number did not account for the people who downloaded the file from other websites or received it from friends through e-mail. Further, the explosion of interest in the clip highlighted a distinction between old and new media. Significantly, about the only place where you couldn't download a copy of the file was on CNN.com, which instead offered to sell a videotape of the program to viewers, delivered by mail in the next week. Commenting on this disparity, Jeff Jarvis of Advance.net wrote, "Welcome to the future of TV! In old TV, a moment like this came, and if you missed it, you missed it. Tough luck. In new TV, you don't need to worry about watching it live - live is so yesterday - because thousands of peers will be keeping an eye out for you to let you know what you should watch, and they'll record it and distribute it" (in Hines 2004). Similar explosions of interest in such things as pop star Ashlee Simpson's lip-synching mishap on Saturday Night Live where she was caught mouthing lyrics to the wrong song, became flustered and walked off the stage, and the controversial Terrel Owens/Nicolette Sheridan Monday Night Football opening in which the Desperate Housewives star jumped naked into the arms of the Philadelphia Eagles wide receiver, emphasized the ability of viewers to catch up to moments from live television days or weeks after they occurred. These are not moments worth collecting for posterity, the way that an entire season of Desperate Housewives or the musical segments of Saturday Night Live are and have been released on DVD. However, they speak to the spontaneity of television and its ability to generate widespread public talk. With the advent of interactive websites, or blogs, these kinds of fleeting cultural moments that generate expansive public discussion are only likely to accelerate, bolstering the enthusiasm for downloadable television.

Networks are beginning to realize the power of the internet to increase the flow of programs to audiences who have neither the time nor inclination to stay glued to the set just in case something happens. ABC entered into a deal with iTunes to provide individual and season packages of their hit shows *Lost* and *Desperate Housewives* to subscribers at costs competitive with the price of DVDs. And network websites are offering clips of popular shows, although not always particularly well. When *Saturday Night Live* aired the popular gangsta rap parody

"Lazy Sunday," those who missed it on television rushed to download it from YouTube.com. NBC responded with threats to sue any website that hosted it and insisted viewers go to NBC's homepage if they wanted to see it. Unfortunately, in their efforts to capture this new audience through legal compulsion, they came across as out of touch with the new digital reality and, arguably, did more harm than good to *SNL* as an "edgy" brand.

In many ways, the changes wrought by both DVR and DVD have led to downloadable television. The digital format that makes both these technologies possible is a far cry from the rather bulky and difficult to manage analog recording technologies on which television was founded. Even when digitization began, the size of the files was far too big to be properly stored on temporary or disposable systems like ZIP drives or CD-ROMs. Thus, up until now, P2P has been largely an issue for the recording industry trying to stop music downloading through services like Napster. Now, with recordable DVD systems incorporated into computers and DVR set boxes, and hard drive capacity spiralling into the gigabytes, that problem has been all too efficiently dispatched. Further development in Blueray technology, which will drive the capacity of DVDs up exponentially, is just around the corner, as are faster online connection times and burning speeds. Sites like iFilm, which are largely subscriber based, compete with free P2P systems like Bitorrent, SoulSeek and YouTube. As technology improves the quality and adaptability of television, video files will soon be as hard to control as audio, if they aren't already. Interestingly enough, however, it is still primarily the music industry that is driving the fight against digital downloading while the television industry still battles over the increasingly fallacious idea of simply closing the broadcasting system to outside influences.

The Recording Industry Association of America (RIAA) lobbied successfully to have file-sharing defined as theft of intellectual property, and a number of legal battles have ensued in an effort to restrict or eliminate the practice, most of which have been largely ineffective. Yet, despite public campaigns by noted popular music artists like Tom Cochrane and Blue Rodeo, Canada did not follow suit. In 2004, for example, a federal court ruled that P2P downloading was akin to

photocopying or taping for private use and was therefore not a violation of copyright law (R. Thompson 2005), and the Supreme Court of Canada called for legislation that took into account users, access, and creativity and not just the financial rights of corporate owners. Such a stand at first set Canada apart from the rest of the industrialized world, in particular the United States, and bolstered its reputation as a forward-looking country not afraid of technology. Not surprisingly, this has changed dramatically. Under mounting pressure from media and entertainment conglomerates and in the wake of increased criticism from the United States, a report from the Standing Committee on Heritage recommended drastic revision of copyright laws that would effectively transform the internet from an open source, user-oriented medium to a commercialized delivery system under the control of private corporations. Tabled in May 2004, The Interim Report on Copyright Reform was hotly criticized for an almost total lack of consideration for creative use and public access. Among its most controversial proposals was that educational institutions be required to pay a licensing fee just to have web access available in the classroom, even if the material being viewed was freely available. Some opposed to these recommendations, such as Michael Geist, a distinguished scholar and activist for intellectual property rights reform, noted in the media that the committee, chaired by Sarmite Bulte, had stacked their witness list primarily with rights holder groups and refused to find a balanced approach between this group and end users like educational institutions, digital artists, and the like (Geist 2004). The debate was renewed in 2005, following increased criminal action against downloaders in the United States and the announcement that Canada will remain on that country's watch list for copyright violations – a warning that is largely credited with having spurred the raid on the Pacific Mall in Markham, Ontario, to find pirated DVDs. Both the RIAA and the Motion Picture Association of America announced that they would seek to bring criminal charges against college students suspected of downloading sound and video files through P2P services (Bridis 2005). At the same time, the Canadian government announced that it would take the Bulte recommendations into consideration in drafting new legislation that would bring Canada back in line with international, U.S.-led treaties like the provisions established by the World Intellectual Property Organization in 1996 ("Government of Canada announces" 2005).

The threat of file-sharing is the possibility that it will seriously impact not only an advertiser-captive audience but also the value of television back catalogues even in their prestige DVD packaging. Further, like DVRs, peer-to-peer networks make the idea of television networks irrelevant. In an era in which television viewers no longer need cable. or even a television, to watch popular shows that can be found and downloaded from the internet, the concept of passive network flow is rendered irrelevant in favour of the flux of active audiences. The utopian promise of the internet is the possibility of making all television programming available to everyone, simultaneously, anywhere in the world. Canadians waiting for the CRTC to license RAI International or Aljazeera, or for TSN to start showing Portuguese league soccer, can theoretically bypass television altogether and access programs through file-sharing for free. There is also the possibility that international broadcasters who are tired of Canadian policies that try to keep them out of the country can start to provide downloading or even video-streaming services themselves at a regular subscription rate equal or even lower to that which cable or satellite companies would charge. This has already begun with services like JumpTV.com. At present, JumpTV.com streams live broadcast signals to subscribers from twenty-nine television channels around the world. The heterogeneity of JumpTV's offerings is astounding: Aljazeera (Qatar), Ceylon TV (Sri Lanka), Kanal D (Turkey), Inter+ (Ukraine), Telesport (Albania), VTV4 (Vietnam), and TV2M (Morocco), among dozens of others. The access to minority-language cultures available through JumpTV puts the offerings authorized by the CRTC to shame, and promises to place the internet in the forefront of the creation of multicultural connections and affinities. Each of JumpTV's channels can be subscribed to individually, with viewers choosing and paying for exactly the services that they want, and only the services that they want.

JumpTV enables the choices of television viewers, while the CRTC still seeks to restrict them. Furthermore, unlike cable companies' rather backhanded version of "choice," JumpTV's success stems from the fact that they view television as if the audience is important,

while traditional stakeholders do not. Faced with overwhelming public demand for certain channels – whether American or foreign-language – the CRTC frequently decides that the public has no right to decide what it would like to watch. Streaming video television and file-sharing both have major repercussions for regulatory agencies like the CRTC. In a future in which viewers access television according to their own interests and schedules, the ability of the CRTC to keep foreign programming out of Canada will face serious challenges. With DVD and DVRs, the way that audiences have traditionally watched television came under threat. With P2P, the very idea of television as a distinct medium is now being contested through global technological convergence and grassroots innovations in non-capitalist exchange systems.

HIGH DEFINITION TELEVISION: THE TECHNOLOGICAL MCGUFFIN

In a case reminiscent of fiddling while Rome burns, the broadcasting industry has pinned almost all its technological hopes on high definition television to revitalize the market. Retail analysts anticipated huge sales of high definition television (HDTV) capable sets during the Christmas 2004 sales period, and commentators hoped that this might finally spur the widespread adoption of the technology in Canada. Heralded by industry, media, and government alike as the most significant change in television technology since the conversion from blackand-white to colour, HDTV has generated little consumer passion relative to technologies like DVDs, DVRs, and P2P. While there is no question that when all variables are in place, picture and sound quality is vastly improved, to say that it is as huge a change as colour was in the 1960s smacks of industry hyperbole. This difference is most noticeable and appreciated for highly detailed programs with a wide frame, like soccer, hockey, or football. The magnification of minute detail

can, however, be a little scary for programs like the Academy Awards, where every wrinkle and mascara blotch is intensified. Furthermore, at this point, high definition offerings in Canada are relatively narrow and it is almost exclusively American networks that are providing the content. At the end of 2004, approximately 1.2 million HD-compatible televisions were in Canada, but only 180,000 of those were actually used to receive high definition broadcast signals (Blackwell 2004). By way of contrast, the United States had more than 1,100 stations broadcasting in high-definition one year earlier, while Canada only had three (Ray 2003). By mid-2006, Shaw Cable systems, which largely monopolizes the western half of the country, offered only nine channels in high definition. CBC only came into the high definition market in time for the 2006 Winter Olympics in Turin. Interestingly, it marked a return to the old-fashioned model of national broadcasting in which the feed came exclusively from Toronto, meaning that in Calgary News at Six airs at 4:00, and lets people in the west know what is happening in Ontario. A handful of additional channels have entered into the HD spectrum, broadcasting a portion of their schedules in high definition, although not all cable systems make the material available to subscribers. These are the national broadcaster CTV, local Toronto station CITY-TV, the specialty sports channels TSN and Rogers SportsNet, Discovery Channel Canada, the Movie Network, and its western regional counterpart Movie Central. In addition, many, but not all, cable and satellite providers carry the four main American networks, FOX, NBC, ABC, and CBS, in high definition way up on the dial. Canada's reluctance to dive into the high definition waters has been flagged by both industry and regulators alike as a major issue that will drive the policy process in a way that other technologies simply have not. CRTC chair Charles Dalfen called the discrepancy between Canadian and American service a "concern" in December 2004 (Brent 2004) and raised the spectre of viewers decamping en masse to grey market satellite providers for the crisper sound and video quality.

Despite the CRTC's insistence that Canadian audiences are ready to pony up huge amounts of money to upgrade their television systems and take advantage of what is in the end a slightly noticeable improvement, there is little to suggest that HDTV poses as great a threat to Canadian television as any of the three other technologies addressed here. To migrate upward to HDTV quality requires not only the purchase of a new high-end television but also renting or buying a set-top box from a cable or satellite company and paying the increased subscriber costs for the channels. In the end, you still get Desperate Housewives, only Bree's nostrils will be seen to flare that much wider. If this is the case, then why is the CRTC so concerned? Their argument is the quality of the viewing experience, which is still undermined by annoying commercial breaks, station identifiers, and pop-up banners. Anyone looking for purity would be just as well served to wait for the DVD versions of the show, which are in high definition but without the ads. Not coincidentally, though, HDTV is almost exclusively an American-driven technology supported by the large American networks. The fact is that NTSC has always been a lower quality broadcast standard than foreign systems like PAL and SECAM, so for many HDTV isn't a major advancement in television but just a way for the North American market to finally catch up to the rest of the world. Meanwhile, the three other technologies discussed here look beyond the north-south axis to a greater sense of global flows and imagine whole other vistas of television content, not just the chance to get the same show in multiple formats. No one would argue that videostreaming on your computer screen offers the best quality picture, but if it's the only way to watch your Italian soap opera, it will probably suffice.

For those who do decide to adopt HDTV, the benefits will not be immediately clear and in some cases there will actually be a marked decline in visual quality. A *National Post* story in December 2004, for instance, notes that "the disappointment of early HD adopters has been heard loud and clear by providers such as cable giant Rogers Communications" (Brent 2004). Among the challenges involved in selling HDTV services to Canadians is the fact that the image quality on high definition broadcasts varies tremendously depending on whether a program has been recorded using high definition equipment, or transferred to high definition from film. Further, a large percentage of high definition programming is regular analog programming that has been upconverted, and which does not look as good as other high definition content. If anything, many viewers have found

that analog programming on HDTV looks worse than on a traditional television, either because it has the wrong aspect ratio, requiring it to be stretched, condensed, or shown with black bars on the sides of the screen, or because the HDTV highlights the flaws in analog material. The prevalence of analog signals, which will continue for a considerable period as old analog material circulates in reruns, is the primary reason that HDTVs are returned to retailers, as people find that they prefer the visual look of older analog sets (Brockhouse 2004). In the end, the adoption of HDTV by Canadian consumers has been slowed not only by its lack of clear-cut superiority to the older standard, but also by the clear absence of any really new or innovative content or viewer experience that effectively expands television as a cultural medium. In this sense, then, HDTV can be seen as the exemplar of a homogenous model of television broadcasting where the industry is trying to dress up old programming in new clothes, fooling no one and attracting few new audiences. Once again, the question why the CRTC has made HDTV a priority can be found, then, south of the border.

The rapid expansion of the HDTV market in the United States, particularly in comparison to Canada, has been driven by the fact that considerably more programming is available to consumers, with a substantially greater number of stations broadcasting in the format. This difference stems from the fact that in the United States, the Federal Communications Commission (FCC) mandated in 1997 that broadcasters had to switch to HDTV signals by the end of 2006. Further, in 2002, the FCC ruled that all television sets sold in the United States had to be HDTV-ready by 2007 (Ahrens 2002). This type of regulation was a break from tradition for the FCC, which had generally adopted a laissez faire attitude to new broadcast technologies. The CRTC, on the other hand, which generally acts to regulate broadcasting according to what it determines to be the national interest, took the traditionally American approach. In its ruling on digital television in June 2002, the CRTC opted to allow the market to drive the adoption of HDTV in Canada, refusing to push broadcasters to adopt the potentially expensive new technology. This decision, which served to spare broadcasters a costly transition that might not be warranted by consumer demand, has created the growing "technological gap between television services in Canada and the U.S." that Charles Dalfen decried at the end of 2004 (Brent 2004). While Canada's intention, according to Michael McEwen of the HDTV transition organization Canadian Digital Television, "was always to lag behind the U.S. by a couple of years" (in Blackwell 2004), within two years of the decision it appeared that the risk was that Canada was falling badly behind on the technological front. It suggests one of two things. Either Canada has to quickly shape up to resume its traditional ten paces behind the American television industry; or, potentially, it could seek more equitable relationships elsewhere to balance off the economies of scale facing a country with wide regional and geographic diversity, large clusters of immigrant populations, and a comparably small population given its size. It is worth noting at this juncture that HDTV and digital television in general was also adopted with great fanfare by the countries of the EU, in keeping with the Television Without Frontiers mandate, to disappointing sales and lacklustre returns in indigenous programming (Iosifidis 2005, 63). It is not entirely clear why Canada, and the CRTC in particular, believed that it would solve their problems as a secondary world market for television.

The stumbling block for HDTV in Canada has been the costs associated with the conversion. During the 2004 Stanley Cup playoffs, The Globe and Mail reported that, despite strong ratings for hockey, the CBC had no plans to broadcast any games in the playoffs in high definition. The reason was that the approximate cost, \$100,000 for a high definition production compared to \$50,000 for an analog one, was not justified by the small number of Canadian households with access to the technology (Houston 2004b). Further, the CBC itself owned no HDTV-capable production trucks, although they were building one, and would have to rent one in order to produce the broadcast. For broadcasters, there is little short-term benefit to converting to HDTV, especially since audience demand in no way suggests that ratings will suddenly spike up and a whole new set of hockey fans will tune in to see with greater clarity if Mario Lemieux' skate really was over the line. Simply put, production costs will clearly increase, but revenues will not necessarily rise. This doesn't even take into consideration the massive start-up costs to convert the technological infrastructure

to high definition, a cost that would most certainly be present in the minds of CBC executives who have to go begging hat in hand to politicians on a yearly basis. Given that the shift to HDTV does not generate revenue or boost profit margins, or excite audiences, the only incentive for broadcasters to make the transition is competition – or, more like cooperation or even collusion – with the United States.

In August 2003, CTV President Rick Brace warned about the capacity that was required to accommodate high definition broadcast signals, once again returning to a media scarcity argument that many thought was long over. He suggests, "there will, at some point, be no room in the tent. Generally, in the industry, you're going to hear rumblings about people getting anxious to launch HDTV. If you don't, you may find yourself before the CRTC asking it to take U.S. services off the grid in order to make room for Canadian [HDTV] content. That's going to be an issue because people very quickly get used to what they're receiving" (in Houston 2003). More than a year later, CHUM's Peter Miller warned that Canadian television was facing a competitiveness problem "if we don't go to HD and the U.S. [channels] go HD, we'll start to lose viewers to the U.S. services" (in Blackwell 2004). This is, of course, based on the assumption that Canadian networks will continue to air American programs using simultaneous substitution, only with poorer picture quality and more commercials. In which case, they may indeed have a point, but it's not one that will generate much sympathy from audiences. The possibility is that by adopting a passive stance in the face of dramatic American action, the Canadian broadcasting industry has placed itself at a competitive disadvantage with the only market they've ever engaged with, and continuing to insist it's the only market that matters. Yet, the fact that audiences themselves are not clamouring for the technology says something about how shortsighted and narrow-minded this view really is. Once again, just as Canada adopted the American broadcast standard in 1952, thereby tying the industry inextricably to our better-established neighbours to the south, the CRTC's HDTV policy, and the reluctance of many Canadian broadcasters to invest in the technology, has reaffirmed the centrality of American broadcasting in the Canadian context and denied even the possibility of a more global, multicultural perspective.

CONCLUSION

It is telling that in the case of HDTV, Canadian broadcasters are relying on old arguments about media scarcity and an American invasion that will crowd out national television until Canada is nothing more than a warehouse for foreign product. However, at the same time, they also claim contradictorily that the reason for HDTV is to better meet the demands of American programming in this country. It seems rather perplexing that they feel they can have it both ways: HDTV is necessary to both keep out and keep in American television. The overriding interest in this one new form of technology comes with little to no consideration of expanded audiences, innovative programming, or creative content. Yet technologies that do provide these kinds of advancements do exist and are being adopted at a far faster rate than HDTV. DVR, DVD, and P2P are welcome not only for their flexibility and ease of use, putting control over television in the hands of the viewer, but also, particularly in the case of the latter two, because they open up the airwaves to whole new cultural vistas. These technologies have the potential not only to dramatically recalibrate the flow of television, but to do so on a global scale that privileges heterogeneity and fosters dynamic audience interaction not only between the technology and the viewer, but between audiences themselves who have been kept separate by nationalist, ethnic, linguistic, and cultural arguments that appear more and more dated. If the purpose of the public sphere is to provide venues for open discussion and debate, for the free exchange of ideas, expressions, stories, and images, then the audience-driven technologies that are transforming television have enormous potential to erase the historic attitude against the medium as little more than a passive, consumerist spectacle. It, therefore, becomes politically urgent to question why Canadian television leaders in industry and government have refused to even consider moving beyond obsession with American competition to think not only more globally in terms of cultural flow, but also more locally in terms of audience participation. By remaining fixated on technologies that reinforce rather than transform the way television is used, Canada is once again missing a crucial opportunity to truly live up to its goals of multiculturalism and create new, global ways of transforming television into a medium of communicative action.