Community Broadcasting: Publics, Participants and Policies

By: Henry Loeser

2. History

Radio

Community radio is the most prominent form of third sector broadcasting in the world. Originating in the 1940s in the Americas on AM frequencies, the establishment of non-commercial alternative community broadcasters across the globe was facilitated by the development of the FM frequency band in the 1960s. This simple, low-cost technology lowered the barriers to access, and enabled media activists to acquire the means and skills necessary to establish their own broadcast operations, often as illegal pirate channels. In many nations, enabling legislation and policy was not the first step towards facilitating the development of a community radio sector, but often times the last. This "pirate to policy" process is a common theme in the worldwide history of community radio.

Not-for-profit and educational channels, established by the Radio Act of 1927 and mostly licensed to schools, colleges and universities, were a small counterpoint to the dominant commercial sector which controlled the majority of available frequencies in the postwar era (Head, et al 1998). Non-commercial "community" radio began with the iconic Pacifica Radio, licensed as KPFA in Berkeley, California in 1948. An outgrowth of the pacifist post-WWII movement, Pacifica sought to serve the ethnic, labor, and socialist communities with an opportunity to share their opinions through access to the public airwaves (Kessler 1984, Tracy 1996). Other community radios in this period included stations established in cooperation with the broadcasting pioneer Lorenzo Milam in Dallas, Portland, St. Louis, and Seattle (Barlow 1988).

The Public Broadcasting Act of 1967 resulted in the formation of a "public service" sector in the USA, populated by those same educational licensees, but now producing a wider range of programs that included information, opinion, and entertainment as a contribution to democracy (Witherspoon, et al 2000).

The media regulator Federal Communications Commission (FCC) was instrumental in the development (or lack thereof) of community radio in the following decades (Bekken 1998).

Reservation of spectrum on the FM band for non-commercial broadcasting enabled the community radio sector to grow incrementally, supported by the trade association National Federation of Community Broadcasters (NCFB)¹, which also facilitated ongoing discussions of the nature and role of community radio (Bergethon 1982).

In 2000, the FCC established Low Power FM (LPFM) as an additional source of access to the FM spectrum for non-commercial community broadcasters. However, legislation that year driven by the commercial broadcast lobby severely reduced the breadth of the initiative, restricting most of the new licenses to rural areas, and awarding the majority of the 600 new licenses to right-wing Christian church groups (Sterling and Keith 2008). After failed legislative attempts in 2005-2009, the Local Community Radio Act of 2010 was signed into law by President Barack Obama, further opening up the LPFM spectrum in cities across the US, and resulting in the process by which more than 1800 new LPFM licenses have been granted since 2013 (Angel Fire 2015).

In the United States, not-for-profit broadcasting enjoys little financial support from government sources. Public service broadcasters average less than 15% of their revenue from government grants (Corporation for Public Broadcasting 2012), and community broadcasters even less, as they are tasked to develop revenue sources primarily from donors in their communities. Advertising is strictly forbidden, and while sponsorship is allowed, these channels, staffed mostly by volunteer participants, often struggle to secure adequate funding streams to ensure their sustainability.

The history and structure of community radio in Latin America is acknowledged to have begun in 1948 with Radio Sutatenza in Columbia, followed shortly thereafter by the miners' radios in the mountains of Bolivia (Gumucio-Dagron 2001). These examples of participatory social movement media, owned and operated by communities, grew to become a template for how community radio could serve as a powerful instrument for social and political action (Downing 2011). Taking advantage of the FM model, access and participation in community radio grew exponentially across Latin America in the following decades, mostly as unlicensed pirate radios due to lack of effective policy in repressive environments. Consequently, many radios were established in support and defense of human rights and social justice for indigenous peoples, the poor and marginalized, workers and political activists. Individual nations developed unique variations on the model: popular radio in Ecuador, free radio in Brazil, participating radio in El

¹ The National Federation of Community Broadcasters survived the many financial struggles common to its members, and still serves to represent the interests of community radio in the USA. Their website is here: http://www.nfcb.org/.

Salvador, community radio in Paraguay, native radio in Mexico, and citizens' radio in Argentina (Brunetti 2000). Policy initiatives have greatly improved the environment in some countries; including Paraguay and Argentina, but in others the "pirates to policy" process still dominates. On the whole, community radio continues in 2015 to be an important institution across Latin America, as evidenced by the 2010 AMARC Conference in La Plata, Argentina, attended by more than 300 community radio members from Latin America (AMARC 2011).

Community broadcasting history in Australia is important due to its early implementation of enabling nationwide policy, and also to its overall success as a primary sector of the nation's media landscape. Following initial recognition of community radio in 1974, the landmark Broadcasting Services Act of 1992 established the legality and legitimacy of community broadcasting, allocating frequencies, facilities and funding for the creation of this third sector of community channels (Rennie 2006). The result was an immediate and incremental development of community radio stations on the FM band across Australia, serving a broad range of diverse communities. The Community Broadcasting Foundation of Australia (2015) estimates that in 2014 more than 400 community radios are operating, staffed by 25,000 volunteers, and funded by a mix of government grants, sponsorship, and donations.

The societal paradigms that contributed to the typologies of community radio in Latin America in the 20th century also were present on the continent of Africa. Dysfunctional governments, repressive regimes, lack of overall infrastructure development, and mismanagement of resources stunted the growth of licensed community radio (Meyers 2011). A resilient form of local community FM radio originated and developed organically across the African continent in the 1970s and 1980s focused less in Africa about political ideology, and more about community development. In this difficult environment, foreign aid agencies and international media activists also introduced the ICT4D model²: community radios constructed and funded by external sources as seedlings and/or surrogates for local community radios. While providing initial benefits to many communities, this model has proven quite difficult to transition to local ownership and sustainability (Fraser and Estrada 2002). Several nations, however, have enabled consistent development and growth of the medium. A prime example is the Republic of South Africa, where in the post-apartheid era, President Nelson Mandela oversaw the creation of a vibrant community radio sector (Valentine 2013) of more than 75 radios that continues to operate in 2015 with the support of enabling policy in the form of large frequency allocations, facilities and partial funding schemes (Mansell and Raboy 2011).

-

² ICT4D is an acronym commonly used by international aid agencies to denote "information and communication technology for development".

Isolated examples of community radio development can be found in Asia, for example in Nepal, Bangladesh, and Indonesia. These radios are primarily similar to African models of ICT4D media development by NGOs resulting in radios and sectors without effective models for independent sustainability. A prime example is Nepal, in which a group of local community radios operate across the country, but struggle mightily to survive solely on support from their communities, forcing them to depend on external resources from international aid organizations (Pringle and Subba 2007). In India, a major initiative to develop a country-wide community radio sector was approved by the government in 2010, establishing the recognition and legalization of community radio. Although hampered at times by restrictive terms and fees, the process of awarding licenses and granting access to broadcast frequencies has continued apace, with the goal of building out a sustainable community radio sector with the projected capacity to contain up to 5,000 individual radio channels (Pavarala 2015). In 2013, The media regulator reported 1,200 applications, 428 letters of intent for licensing, 148 radios licensed and operating, and 227 applications in process (India Ministry of Information and Broadcasting 2013).

Unlike the dominant commercial broadcasting ethos in the USA, public service state-run broadcasting monopolies for radio and television existed across Western Europe, both before and after WWII, and right through to the end of the century (Burns 1998, Shiers & Shiers 1997). Examples such as the British Broadcasting Corporation (BBC), Radiodiffusion Television Francaise (RTF), Arbeitsgemeinschaft der öffentlich-rechtlichen Rundfunkanstalten der Bundesrepublik Deutschland (ARD), and Osterriech Rundfunk (ORF) were seen by policy makers as adequately fulfilling the public's need for information, opinion, and entertainment (Abramson 1987). The exclusivity of public service state-run broadcast radio and television monopolies throughout Western Europe was eventually dismantled in favor of a "public vs. private" dichotomy. The process brought with it the establishment of private commercial channels, and the formation of lucrative national (and local) commercial media markets, often dominated by a select few large corporate operators. Notably, Austria was among the very last nations to open their broadcast spectrum to private broadcasters, ending the monopoly of ORF in 1995 (Purkarthofer, et al 2010). This new paradigm of radio and television broadcast spectrums now controlled by either government or commercial interests was a catalyst in the demand for a third way; one that afforded access and participation for ordinary citizens and their communities (Lewis and Booth 1989, 105).

The 1960s and 1970s brought the rise of leftist counterculture values, politics and lifestyles to Western Europe; prompting many communities, lacking access to the broadcasting airwaves, to subvert the dominant broadcast paradigm by constructing their own unlicensed pirate radio broadcasting stations. These alternative radios gained substantial audiences and support from

communities, and while still largely unlicensed, formed the origins of community radio in Europe (Peissl 2013). The legalization of community radio beginning in the 1970s and continuing across Western Europe through to today has established the sector as a viable third way of radio broadcasting (see Figure 3).

In Central/Eastern Europe, the post-WWII authoritarian paradigm that predominated the region also exerted absolute control of civil societies and media environments; leaving listeners and viewers with only state-run broadcasters producing mostly tightly-controlled propaganda. Some outliers did manage to spring forth on FM frequencies as pirate radios, such as Radio Student in Ljubljana, Tilos Radio in Budapest, and Radio Stalin in Prague to name a few. Overall, community broadcasting in the post-authoritarian states of Central/Eastern Europe, even a generation after the transition, still has not developed as a recognized sector of erstwhile pluralistic media environments (Doliwa and Rankovic 2014). One exception is Hungary, where a community radio sector was legalized in 1995 (Molnar 2014), but struggles to survive today under the policies of the current Hungarian government (Varga 2015).

Table1. Community radio in the European Union*							
Country	No. of services	Legal status	Public funding				
Austria	12	No specific provision	No				
Belgium	11	Well established	Yes				
Bulgaria	3	No specific provision	No				
Czech Republic	3	No specific provision	No				
Cyprus	0	No specific provision	No				
Denmark	175	Well established	Yes				
Estonia	0	No specific provision	No				
Finland	5	No specific provision	No				
France	683	Well established	Yes				
Germany	304	Varies region to region	Yes				
Greece	10	Mainly unlicensed	No				
Hungary	100	Well established	Yes				
Ireland	21	Well established	No				
Italy	100	Well established	No				
Latvia	0	No specific provision	No				
Lithuania	0	No specific provision	No				
Luxembourg	1	No specific provision	No				
Malta	38	Well established	No				
Netherlands	264	Well established	Yes				
Poland	30	No specific provision	No				
Portugal	30	Mainly unlicensed	No				
Romania	10	No specific provision	No				
Slovakia	2	No specific provision	No				
Slovenia	3	No specific provision	No				
Spain	130	Mainly unlicensed	No				
Sweden	165	Well established	No				
United Kingdom	159	Recently adopted	Yes				

Figure 3: Community Radio in the European Union 2008 (Buckley 2009)

In the United Kingdom (UK) the 1972 Sound Broadcasting Act broke the BBC monopoly and unlocked the radio spectrum, authorizing the licensing and development of private local radio in the UK, albeit mostly commercial radio for many years (Scifo 2011). These first local FM radios in the UK failed to meet the most basic of community radio criteria as presented by the scholar Peter Lewis (1977), which led to further discussions arguing for the legalization of the hundreds of pirate radios operating across Britain, including the famous offshore pirate ships of

the 1960s, and in 1983 the formation of the Community Radio Association (CRA)³. The 1990s saw the development of a small group of legally licensed local radios, but without the benefit of comprehensive legislation and funding, these channels faltered, and the community radio sector remained chiefly the province of unlicensed pirates. That changed when the newly created Office for Communications (OFCOM) in 2004 began the establishment of a genuine community radio sector in by incrementally awarding 106 new broadcast licenses, many to ethnic and marginalized communities, over the next several years. By 2010, more than 200 licensed community radio were broadcasting on terrestrial frequencies across the UK, and the OFCOM 2015 annual report listed 233 community radios currently on air (OFCOM 2015) including stations in England, Wales, Scotland and Northern Ireland (see Figure 4). This new aggressive licensing environment, however, is not accompanied by any significant government funding mechanism, leaving community radio to develop private revenue streams such as donations and advertising for their sustainability (Buckley 2009).

_

³ Originally founded as the Community Radio Association, the organization in 2015 is known as the Community Media Association, and continues to support community broadcasting in the UK. You can view it here: http://www.commedia.org.uk/.

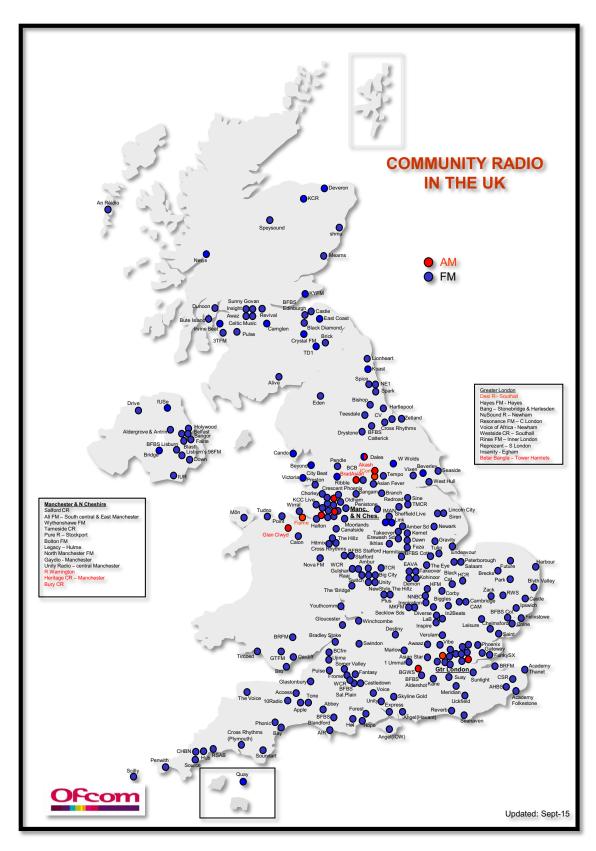


Fig 4: Community Radio Stations in the UK 2015 (OFCOM)

Thanks to legislation by parliament in the 1980s, France can lay claim to one of the most vibrant community radio sectors in the world, with over 600 channels operating across the country licensed on FM frequencies, and supported by government funding (Buckley 2010). Assimilating the former unlicensed pirate radios of the leftist counterculture, the sector includes a mix of community or "associative" radios serving ethnic and marginalized communities, as well as those promoting political and ideological philosophies, and operated by local not-for-profit organizations (Cheval 2012). The competitive funding model, paid by a portion of the commercial radio advertising revenue pool, typically provides more than half the annual revenue for an average radio, and is historically the oldest continually functioning public funding mechanism for community media in Europe.

Instability and fragmentation of politics in Italy and the resulting dysfunction of media regulation has resulted in a similarly unstable and fragmented non-commercial alternative broadcasting environment in Italian society for the past 50 years. The 1975 Reform Law, coupled with a series of court decisions, effectively broke the state broadcasting monopoly, and legalized private broadcasting for the first time (Scifo 2016). Those actions, not accompanied by effective regulatory measures or enforcement, unleashed a wave of haphazard commercial broadcast development (Kelly, et al 2004). The 1990 Broadcasting Act recognized "community" broadcasters as not-for-profit entities and as "expressions of particular cultural, ethnic, political religious instances" (Commissione di vigilanza servizi radiotelevisivi 1990). Barbetta (1997) conducted research of the private radio sector in Italy that identified associations representing more than 500 radios affiliated with the Catholic church, about 20 associated left-wing radios, and 4 large independent radios, led by Radio Populare in Milan. Despite the presence of policy, the paradigm for radio and television broadcasting in Italy remains one of dysfunction, as many community radios operate without licenses, and struggle to survive in an environment rife with political interference, corruption and economic uncertainty (Radovan 2007).

Unlike most countries where community radio and community television originate and evolve in distinctly differing media ecosystems, both forms are inextricably linked together in the Netherlands. The Media Act of 1987 affirmed the earlier establishment of locally owned and operated local community radios, televisions and even the entire cable TV systems (Huizenga 2002). This so-called "Dutch" model of local government-supported community channels combined elements of the public service, open channel, and public access models; mandated by national government policy, and supported by additional revenue sources including advertising, sponsorship and donations (Buckley 2010). The resulting community broadcasting

environment is robust, with more than 393 community broadcasters in the Netherlands in 2015, with multiple channels offering a diverse spectrum of programming in small towns and the major cities (deWit 2016).

Germany

The community radio sector in Germany began with the 1977 founding of Radio Dreyeckland in Freiburg as an unlicensed pirate radio by anti-nuclear activists, and in 1988 became the first licensed non-commercial local Freie Radio (free radio) in Germany. The German media landscape is noted for its fragmentation, as each of the 16 Lander (federal states) has its own media regulations and media regulator, creating distinct media environments. Subsequently, the community broadcasting sector is also highly fragmented and comprised of numerous forms, including educational, campus, open channels, and non-commercial local broadcasters (see Figure 5). The distinction between philosophies of the free radios versus the open channels in Germany is a source of much debate among community media advocates and practitioners (Coyer and Hintz 2010). In 2015, the Bundesverband Freier Radios (Free Radio Association)⁴ lists 31 members including some new projects and online radios. Funding mechanisms are generally supported by a small percentage of the user fee charged to each household, collected on a national level, then distributed by the federal level media regulators.

⁴ The Bundesverband Freier Radios list of members is here: http://www.freie-radios.de/radios/adressliste.html.

	ОК	NKL	SBF	BRF/C	AFEL	CR/CTV	Total
Baden-							
Wurttemberg		12			5		17
Bayern		3			4	16	23
Berlin-							
Brandenburg	1	1					2
Bremen				1			1
Hamburg		2		1			3
Hessen	4	7					11
Mecklenberg-							
Vorpommen	5	1					6
Niedersachsen				15			15
Nordrhein-							
Westfalen			30		1	13	44
Rheinland-Pfalz	20						20
Sachsen		3			1	4	8
Sachsen-Anhalt	7	2					9
Schleswig-							
Holstein	4						4
Thuringen				7		3	10
Total	41	31	30	24	11	36	173
OK = Open Channel TV or Radio; NKL = Non-Commercial Local Radio;							
SBF = Citizens Broadcast Service; BRF/C = Community Broadcaster;							
AFEL = Educational Broadcaster; CR/CTV = Campus Radio / TV							

Figure 5: Citizens' Media in Germany (Bundesverband Offene Kanale 2015)

Television

The Australian scholar Ellie Rennie (2003) identified three major themes that greatly influenced the origins and development of community television worldwide: access and freedom of speech in the USA and Canada which led to the cable-access model, access versus quality of program output in the open channels of Europe, and the role of information and communication technology for development in support of social change in the "global south". While the technology for production and delivery of terrestrial and/or cable television programs has been known throughout the world since the 1930s, the actual implementation of television broadcasting for much of the world has been primarily that of commercial and state-

run channels (Abramson 2003). For a variety of reasons, including technological, economic, social and political factors, the development of a true community television sector has occurred in a precious few societies.

The limited availability of frequencies for delivery, the substantial costs associated with production, and the recognized political power of the medium have all contributed to the lack of development for community television, especially in the less-developed societies of the southern hemisphere, where community radio has instead gained strong footholds. Consequently, a history of community television is dominated by the history of the public access PEG channels of the USA and Canada (Engelmann 1996), and by the open channels and independent television stations of Europe and Oceania. In these nations, it has been the combination of economic prosperity, functional governments, proliferation of broadcast media forms, and the enactment of enabling policy that have been instrumental in their development of community television. It is these viable community television sectors that form the background for understanding the history of the community television phenomenon.

The history of community television as we know it today begins in the United States and Canada with the origin of the cable access PEG television model. In the 1960s several early alternative television activists developed the cable access channels concept, most prominently George Stony, who was instrumental in the inclusion of a cable access PEG requirement provision in the first cable system franchise agreement in New York, NY in 1970. The cable access PEG model was encoded in policy enacted by the USA Federal Communications Commission (FCC) in 1969, and revised by the FCC in 1970. It included a "must provide" and "must carry" policy requiring every cable TV system in the top 100 USA television markets to facilitate 3 access channels: one each for public, educational, and government output (Gillespie 1975). The policy essentially made every cable system operator responsible to not only construct and operate facilities for production and delivery, but also to provide funds for organizational needs, training and recruitment of volunteers to staff the channels. This launched the cable access phenomenon, with new access channels providing opportunities for communities across America to produce and deliver alternative content (Engelmann 1990, Pool 1973).

_

⁵ You can view an interview about the history of cable access television with George Stoney here: https://www.youtube.com/watch?v=-M0m0jVXdOA

The legal jurisdiction of the cable access requirement was later changed by the US Congress in the Cable Communications Act of 1984, which handed the authority from the FCC to local governments and their individual franchise cable system agreements (Starr 2000, Fairchild 2001). Coinciding with the proliferation of local cable access channels across the country, the cable access trade association Alliance for Community Media (ACM) was formed to support, promote and protect the interests of cable access channels. The USA cable access PEG model continued to thrive into 1990s, and reflective of 40 years of favorable policy and funding environments in the United States, the various iterations of community television in the cable access model numbered greater than 3000 in 2008, including channels operated by independent not-for-profit organizations, local governments, or by the franchised cable system operators (Goldfarb 2008). For example, see Figure 6 map of the cable access and community channels in the Chicago, II. metropolitan area.

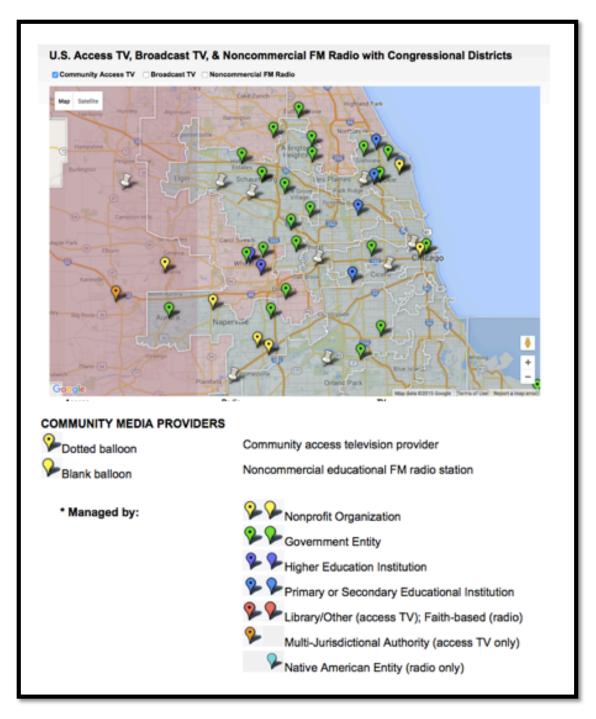


Figure 6: Chicago Area Cable Access Televisions 2015 (Community Media Database)

The neoliberal commercial model of broadcasting was prioritized over the public service ideal by the broadcast deregulation in the United States Telecommunication Act of 1996 (Ali 2012b). A similar dynamic occurred in the cable access sector, as new legislation initiatives at the state level, championed in part by the neoliberal political organization American Legislative Exchange Council (ALEC), in more than 20 states, removed the "must carry" and "must provide"

requirements in the cable system operators' franchise agreements (Progressive 2013). This trend has fueled the continued degradation of cable access PEG model, resulting in a reduction of numbers of cable access channels in the USA. New legislation, the Community Access Preservation Act of 2013⁶, has been proposed but not yet approved in the US Senate to restore the cable system operators' franchise fee requirement and guarantee reliable funding for cable access channels.

Similar in time frame and events to the USA, the origin of community television in Canada is also the story of several prominent experiments and projects pioneering the concept of cable access TV (Howley 2005a). That lead to enactment of policy by the Canadian Radio-Television and Telecommunications Commission (CRTC) in 1971 requiring all cable television systems operators to provide public access channels, as well as the facilities and organizational funding as needed. In parallel to the prolific growth of the cable access channels in the USA, Canada also saw the establishment of hundreds of community cable access channels across the country in the 1970s and 1980s. These channels formed a distinct sector of Canadian broadcast television, prospering well into the 1990s, providing a community alternative to mainstream commercial and public service offerings in cities, towns and indigenous communities across Canada (Ali 2012a). They also enjoyed the support of several regional community TV trade associations including Federation des televisions communities autonomes in Quebec, and a sub-section of the national trade association Canadian Cable Television Association.

In Canada, for nearly 30 years, cable access channels enjoyed the protection of national policy mandates for their legitimacy and funding through the "must provide" and "must carry" provisions enacted in 1971. This dynamic however, was disrupted in 1997 when deregulation in Canada deconstructed the mandatory cable access model, resulting in substantial turbulence in the community media sector, and general decline in the number and quality of cable access community televisions. New policies enacted by the media regulator CRTC in 2002 slowed that decline. Recent initiatives in Canada have brought forth proposals towards building a network of publicly funded multiplatform community media centers, including the creation of many new community radio and television channels independent from cable companies. Since then, several independent free-standing community TV channels were launched, broadcasting over terrestrial frequencies as well as cable, including stations serving local communities in Alberta, Ontario, New Brunswick, and Nova Scotia (Timescale 2009).

_

⁶ Introduced by Senator Tammy Baldwin of Wisconsin, you can view the text from the Library of Congress here: https://www.congress.gov/bill/114th-congress/senate-bill/1244.

In Australia, after several test broadcasts in the 1980s, the Broadcasting Services Act of 1992 legalized community television. The act authorized the reservation of terrestrial frequencies, and funding mechanisms for constructing community television production facilities. The legislation spawned a new community television sector, which grew with more than 80 licenses issued, and flourished in both urban and rural environments with stations broadcasting alternative programming often targeted to minority and marginalized communities (Rennie 2006). Community television in Australia saw a period of expansion when in 2002, the original Broadcast Services Act was amended by parliament to authorize several new large-coverage terrestrial community TV licenses, creating new TV stations in Sydney, Perth, Brisbane and Melbourne. These stations are currently operating with licenses and partial funding from the national government. The trade association Australia Community Television Association (ACTA) also continues to support the sector with advocacy and training for member stations and participants. New Zealand also has a history of community television, with original independent channels broadcasting on terrestrial frequencies, such as Channel North TV, which developed from a community center project, and has maintained its output and service to the community through years of policy changes challenging the continued sustainability of the channel (Peters 2015).

Whereas cable television was the main conduit for the development of community television in the USA, cable television did not enjoy the same early popularity in Europe, with fewer cities wired for cable TV systems of significant penetration. Consequently, media activists were typically limited to terrestrial frequencies for their channels, where the barrier to entry was substantial due to prohibitive costs and extensive know-how requirements, thereby limiting the opportunities for unlicensed pirate television (Buurma 2013). Typically for community television in Europe, policy came first, facilitating and supporting the development of new terrestrial broadcasting channels, often solving the cost and know-how problems through government ownership and control in the "open channel" model. With the advent of the 21st century, cable systems were eventually built out with higher penetration rates, providing more opportunities for alternative cable access channels independent of government ownership.

As was the case with community radio in the UK, absent of a specific policy enabling the development of a genuine sector, several independent community televisions operated from the 1970s in Britain, including the Bristol Channel, which broadcast as a cable access community TV from 1973-1975 (Bristol Post 2011). Some continue to the present, resulting not from a nationwide mandate, but more directly from local grassroots civil society activism. Examples include Bristol Television and Northern Visions TV, which has broadcast terrestrially in Belfast, Northern Ireland, and Southwark TV in London, an online curated video channel. In the

1996 Broadcasting Act, the first temporary service licenses (RSL) were authorized for local community television, spurring the growth of the form. In 2010, the United Kingdom media regulator Office for Communications (OFCOM) authorized the creation of a community television sector by opening some full-time local terrestrial frequencies for non-commercial alternative community television. While some debate persists about the true community intentions of several of the new licensees, new community televisions were launched in a number of cities across the UK, including Mustard TV in Norwich, and Sheffield Live TV in Sheffield. The Sheffield organization is noteworthy in that it has utilized a unique "shareholder" model to raise funds for constructing and operating the station (Buckley 2013).

The Republic of Ireland, a nation similar in size and population to Austria and the Czech Republic, in addition to its substantial community radio presence, has boasted a small community television sector with licensed stations operating as of 2013 in the cities of Cork, Dublin and Nava (Murray 2015). Thanks to the 2009 Broadcast Act, the channels were afforded "must carry" status on both terrestrial and cable delivery systems, along with competitive funding mechanisms through the Sound and Vision Fund⁸. These government policies established the channels as stable, relatively sustainable entities serving a range of community interests, similar to their community radio counterparts. Subsequent reductions in funding from the Irish government, and the lack of support from cable system operators, has threatened the long term viability of the sector. Recently Dublin Community TV in was forced to curtail its full-time broadcasting and revert to a reduced output model as they seek new sources of funding to continue operations (Byrne 2015).

Beginning about 2002 in Italy, a network of small pirate televisions sprang up in urban neighborhoods utilizing open micro spaces in the terrestrial spectrum to provide access for communities to broadcast programs. A reaction to the dysfunctional management of the broadcast spectrum and subsequent dominance of large media conglomerates, these "telestreet" channels (Berardi 2003) flourished in cities across the Italy for much of the decade. This Italian telestreet model is one of the few recognized examples worldwide of pirate television, but unlike the radio "pirate to policy" process, these innovative pirates did not lead to the enactment of enabling policy. Instead, the arrival of internet delivery for television

⁷ Co-owned and operated with Sheffield Live Radio, the channel can be seen here: http://web.sheffieldlive.org/.

⁸ For more about the Sound and Vision Fund of Ireland, go to http://www.bai.ie/index.php/funding-sectoral-support/sound-vision/.

spawned a new model of web television beginning in 2004, and continuing to the present with more than 100 community televisions (see Figure 7) streaming programs on the internet, without need for a license (Andreucci 2010).

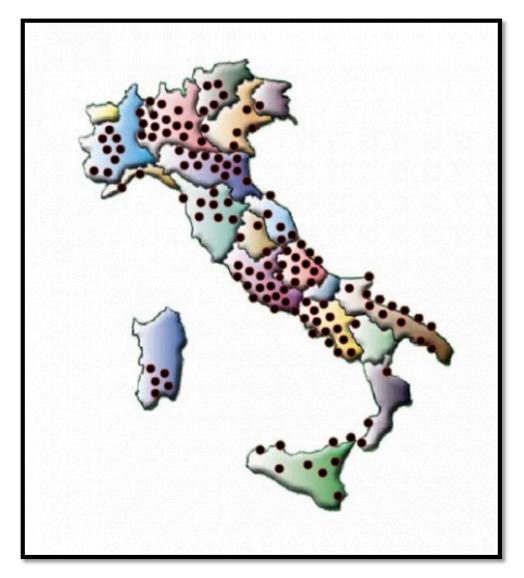


Figure 7: Map of Italian web televisions (by province) (Altra 2009)

The open channel philosophy in Germany in the 1980's can be traced to the success of cable access televisions in the USA (Linke 2016). Pilot cable TV projects in 1984 in Berlin, and 1985 in Dortmund facilitated the creation of open channel televisions in those cities as the first in Germany. The open channel radios and televisions offered a first-come, first-served access policy, without any structured program schedule, with 100% ownership and funding of

operations directly from the media regulator. The open channel form has grown to number 41 in 2015 (see figure 5), and evolved over several decades to also include private community ownership, but generally retains the original policy of unfettered access, lack of curation of content, and media regulator funding/ownership mechanism (Linke 2016).

Digital Delivery Technologies

The traditional terrestrial means of radio broadcasting (via FM and/or AM frequencies), and television broadcasting (via long wave and/or cable) have been the dominant technology in most of the world since the mid 20th century (Alinsky 1988). These broadcasters, who for generations were secure in their positions mandated by licenses in a limited frequency spectrum or exclusive cable systems, now are challenged by new technologies both in the terrestrial/cable sphere, and also online utilizing non-terrestrial internet protocol (IP) delivery.

Terrestrial delivery technologies are evolving, as evidenced by the migration of terrestrial television broadcasts from analog to digital service in most of Europe and North America in the 1990s. Along with the digitalization of cable TV systems, television in the traditional terrestrial/cable platforms successfully improved the technical quality of its broadcasts by agreeing on a single new digital technology. Thus, high-definition television is now the standard for much of the developed world (Cianci 2012). Radio broadcasters, however, have struggled to adopt new terrestrial transmission technologies, despite the implementation of terrestrial digital technologies such as Digital Audio Broadcast (DAB) and Digital Radio Mondiale (DRM) by regulators and practitioners. The fragmentation of the sector, the efficiency and effectiveness of FM, and the lack of substantial benefits in coverage or quality offered by the new digital terrestrial technologies have all slowed adoption (O'Neill 2010).

For community broadcasters, similar to their counterparts in the commercial and public service sectors, the present technological delivery platforms for television and radio appear to be sufficient to sustain the media in the short term. Retaining FM and cable delivery systems is especially important to community broadcasters, as they have limited resources to invest in new transmission technologies, and are likely to be at a disadvantage to their more powerful counterparts commercial and public service when competing for access and control over the new technologies. Community broadcasters fear what is commonly referred to by activists and practitioners as the "analog ghetto", where the losers of the competition for new digital terrestrial broadcast transmission technologies are relegated to the old technologies, and facing potential shutoff by regulators (Oakley and O'Connor 2015). Meanwhile, as the competition over adoption of these new terrestrial delivery technologies continues, users are

continuing to migrate to IP delivery for receiving (and delivering) their audio and video programs (Frank 2004).

IP delivery (via connection to the world wide web) debuted as an extension of terrestrial output for radio and TV in the latter 20th century. Its continued growth in uptake not only has increased its role as an extension of terrestrial delivery, but also can be seen as incrementally replacing terrestrial as the primary delivery platform for many broadcasters. IP delivery offers broadcasters the power and reach extending beyond their terrestrial coverage area to now connect via the world wide web anywhere in the world. Webcasting is seen by many as the ultimate solution to the questions of access and participation for alternative broadcasters, based on the low barriers to entry and universal distribution capabilities of the technology (Singer 2013). Indeed, thousands of existing terrestrial stations stream content via IP similar to their commercial and public service counterparts, and many community broadcasters have launched new radio and television streams via exclusive IP transmission.

This migration to IP delivery however, is not without substantial issues for the broadcasters and the receivers. An important issue for community broadcasters regarding webcasting is the incremental costs of streaming. Each listener or viewer is connected to the IP broadcast by an individual stream, so that unlike terrestrial delivery, the broadcaster must pay for every stream, incrementally increasing costs as listenership/viewership increases. In addition, the streaming technology reveals every receiver's IP address and identity, which exposes them to the potential for unwanted intrusion and surveillance by third parties (Shipman-Wentworth 2014). Finally, questions of access and media power in the context of net neutrality are present in the online paradigm similar to its terrestrial predecessor.

Nevertheless, migration of online users away from traditional legacy media is well underway, as younger demographics are abandoning traditional terrestrial and cable delivery at high rates. The Nielsen television survey for 2015⁹ reports that in the USA:

- -Teens (12-17) watched 17 hours of traditional TV per week in Q3, an 11.5% drop year-over-year and a 30% contraction from 2011;
- -Older Millennials (25-34) watched 21 hours and 10 minutes per week in Q3, an 8.6% decrease year-over-year and a 23.8% drop from 2011;
- -Gen Xers (35-49) watched 28 hours and 41 minutes per week, a 3.4% decrease year-over-year (equating to 1 hour per week) and a 10.7% contraction from 2011;

⁹ The complete Nielsen survey results and marketing charts are available here: http://www.marketingcharts.com/television/are-young-people-watching-less-tv-24817/.

As Figure 8 shows, the take-up of television viewing for younger demographics via IP continues to grow, as more 18-24 year-old viewers are using online delivery than traditional live delivery.

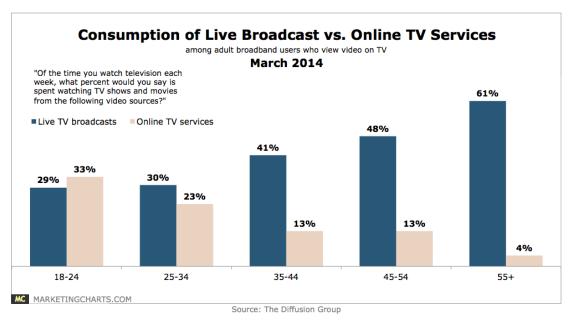


Figure 8: Nielsen 2015 Survey Results - Television Consumption

The take-up of online radio is also apparent, as evidenced by the USA Edison Research survey of 2015¹⁰, which reported that for the first time, more adults aged 12+ listened to online radio than listened to terrestrial radio (Figure 9). While the technology appears to be driving the migration to new platforms, individual citizens, groups and communities still are apparently finding on these new platforms the familiar broadcasting organizations and content to which they are accustomed.

¹⁰ The complete Edison Research survey 2015 can be viewed here: http://www.edisonresearch.com/the-infinite-dial-2015/.

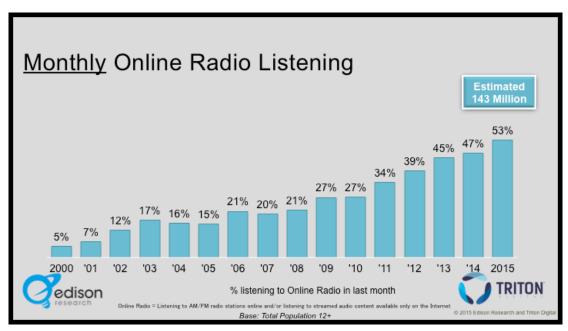


Figure 9: Edison Research Survey 2015 - Online Radio Listening

Abramson, A. (2003). The History of Television, 1942 to 2000. Jefferson, NC.: McFarland.

Ali, C. (2012a). "A Broadcast System in Whose Interest? Tracing the Origins of Broadcast Journalism in Canadian and Australian Television Policy, 1950-1963". *Communication Gazette*, 74(3), 277-297. Doi:10.1177/1748048511432608

Ali, C. (2012b). "Media at the Margins: Policy and Practice in American, Canadian and British Community Television." *International Journal of Communication*, *6*, 1119-1138.

Alinsky, M. (1988). *International Handbook of Broadcasting Systems*, Westport, CT.: Greenwood Publishing.

AMARC International (2011) "AMARC Annual Report 2010". http://www.unesco.org/webworld/publications/community_media/pdf/chap7.pdf Accessed 12.12.2015

Andreucci, G. (2010). "Local Communities Online: Mapping Local Web TV's in Italy". *Netcom* 24-2/4, 2010. https://netcom.revues.org/417 Accessed 14.12.2015

Angel Fire. (2015). "LPFM Database". http://www.angelfire.com/nj2/piratejim/lpfm.html Accessed 8.12.2015.

Barbetta, G. (1997). The Non-Profit Sector in Italy. Manchester, UK.: Manchester Press

Barlow, W. (1998). "Community Radio in the US: The Struggle for a Democratic Medium." *Media, culture and society*, v.10 (1998): 81-105.

Bekken, J. (1998). "Community Radio at the Crossroads: Federal Policy and the Professionalization of a Grassroots Medium." In R. Sakolsky and S. Dunifer. (eds.), *Seizing the Airwaves: A Free Radio Handbook*. San Francisco, CA.: AK Press.

Bergethon, B. (1992). "Growth and Change in Community Radio 1950-1980: Funding, Programming and Community Involvement". Masters thesis, Temple University, Philadelphia, PA.

Bristol Post. (2011). "Experiment launched in 1970s that brought cable TV to city". This is Bristol. http://www.bristolpost.co.uk/Experiment-launched-1970s-brought-cable-TV-city/story-11292188-detail/story.html Accessed 19.12.2015.

Brunetti, V. (2000) "The Development of Community Media in Latin America." UNESCO http://www.unesco.org/webworld/publications/community_media/pdf/chap7.pdf Accessed 10.12.2015.

Buckley, S. (2010). *Third Pillar of Media Pluralism: Community Broadcasting in the UK and Europe*. London School of Economics.

http://www.lse.ac.uk/media@lse/events/MeCCSA/pdf/papers/SteveBuckley.pdf
Accessed 29.11.2015

Buckley, S. (2013). "Sheffield Live TV Presentation". at Community Media Forum of Europe Conference. Brno, Czech Republic. 8.10.2013

Burns, R. (1998). *Television: An international history of the formative years*. London, UK.: IEE.

Buurma, R. (2013). Interview by author. Brno, Czech Republic. 9.10.2013

Byrne, J. (2015). Interview by author. Dublin, Ireland. 23.4.2015.

Cheval, J. (2013). "Guess Who Was on the Radio Last Night?". in *Radio – Community Challenges and Aesthetics*. G. Stachyra. (ed.). Pp. 53-62, Lublin, PL.: Marie Curie – Sklodowska University Press.

Cianci, P. (2012). High Definition Television. Durham, NC.: McFarland.

Commissione di Vigilanza Servizi Radiotelevisivi. (1990). "Legge 6 agosto 1990, n. 223 Disciplina del Sistema Radiotelevisivo Pubblico e Privato". (Google Translated). http://www.camera.it/_bicamerali/rai/norme/l223-90.htm Accessed 20.1.2016

Coyer, K., and A. Hintz. (2010). "Developing the Third Sector: Community Media Policies in Europe". In Klimkiewicz, B. (ed.). (2010). *Media Freedom and Pluralism*. Budapest: Central European University Press.

Corporation for Public Broadcasting. (2012). "Report: Alternative Sources of Funding for Public Broadcasting Stations".

http://www.cpb.org/aboutcpb/Alternative Sources of Funding for Public Broadcasting Stations.pdf Accessed 6.12.2015

deWit, P. (2016). Interview with author (via Skype). 9.1.2016

Doliwa, U. and L. Rankovic (2014). *Time for Community Media in Central and Eastern Europe*. CMFE. http://cmfe.eu/wpcontent/uploads/U.DoliwaL.RankovicCEJoC_12.pdf accessed 13.12.2014.

Downing, J. (2011). *The Encyclopedia of Social Movement Media*. Thousand Oaks, CA.: Sage Publications

Engleman, R. (1990). *The Origins of Public Access Cable Television 1966-1972*. Columbia, SC.: Association of Education in Journalism and Mass Communication

Engleman, R. (1996). *Public Radio and Television in America: A Political History*. Thousand Oaks, CA.: Sage.

Fairchild, C. (2001). Community Radio and Public Culture: An Examination of Media Access and Equity in the Nations of North America. Cresskill, NJ.: Hampton Press.

Fraser, C. and S. Estrada. (2002). "Community Radio for Change and Development". *Development* 45 (4), p.69-73. Society for International Development. Sage.

Frank, B. (2004). "Changing Media, Changing Audiences. Communications Forum - Massachusetts Institute of Technology". http://web.mit.edu/comm-forums/changing_audiences.html Accessed 25.1.2016

Gillespie, G. (1975). *Public Access Television in the United States and Canada*. New York, NY.: Praeger.

Gumuccio-Dagron, A. (2001). "Making Waves: Stories of Participatory Communication for Social Change". Report to the Rockefeller Foundation, New York: Rockefeller Foundation

Head, S., C. Sterling, et al. (1988). *Broadcasting in America*. Boston, MA.: Houghton Mifflin Company.

Howley, K. (2005). *Community Media: People, Places and Communication Technologies*. Cambridge, UK.: Cambridge University Press.

Huizenga, M. (2002). "Convergence and Public Local Broadcasting in the Netherlands". Lecture presented at conference RIPE2002 Broadcasting and Convergence: Articulating a new Remit. Helsinki, Finland

India Ministry of Information and Broadcasting. (2015). "Facts and Figures". http://mib.nic.in/demo.aspx
Accessed 20.12.2015.

Kelly, M., G. Mazzoleni, and D. McQuail. (eds.). (2004). *The Media in Europe: A Euromedia Handbook*. Thousand Oaks, CA.: Sage

Kessler, L. (1984). *The Dissident Press: Alternative Journalism in American History*. Newbury Park, NY.: Sage.

Lewis, P.M. and J. Booth (1989). *The Invisible Medium: Public, Commercial and Community Radio*. Basingstroke, UK.: MacMillan Education.

Linke, Jurgen. (2016). Interview by author. Vienna, Austria. 12.2.2016.

Mansell, R. and M. Raboy. (2011). *The Handbook of Global Media and Communications Policy*. New York, NY.: John Wiley and Sons.

McCausland, R. (2015). "Community Media Database 2015". https://docs.google.com/spreadsheets/d/1BRcbLK-R8-BsrqDTDnznED6ZvNkAKtAhlunA6sCjgBE/edit?hl=en&authkey=CMWeo7AO#gid=0 Accessed 15.12.2015

Meyers, M. (2011). "Voices from Villages: Community Radio in the Developing World". Report to the Center for International Media Assistance.

http://www.marysophiamyers.org/pdfs%20of%20my%20publications/1%20Voices.pdf. Accessed 30.11.2015

Molnar, P. (2014). Interview by author. Budapest, Hungary. 2.6.2014.

Murray, C. (2015). Interview by author. Dublin, Ireland. 23.4.2015

Oakley, K. and J. O'Connor. (eds.). (2015). *The Routledge Companion to the Cultural Industries*. London: Routledge.

OFCOM (Office of Communications for the United Kingdom). (2015). "Communications Market Report". http://stakeholders.ofcom.org.uk/binaries/research/cmr/cmr15/CMR_UK_2015.pdf Accessed 8.12.2015.

Peters, C. (2015). *Our community voices: The birth of community television in Whangarei*. Auckland, NZ: Auckland University of Technology.

Peissl, H. (2013). Interview by author. Klosterneuburg, Austria. 28.11.2013.

Price-Davies, E., and J. Tacchi. (2001). *Community Radio in a Global Context: An Overview of Community Radio in Australia, Canada, France, Holland, Ireland and South Africa*. Sheffield, UK.: Community Media Association.

Padovani, C. (2007). *A Fatal Attraction: Public Television and Politics in Italy*. Lanham, MD.: Rowman and Littlefield

Pavarala, V. (2015). "Interview with Vinod Pavarala on Community Radio in India". UNESCO. https://www.youtube.com/watch?v=HIStsTyQjb0 Accessed 12.12.2015

Pool, I. (1973). Talking Back: Citizen Feedback and Cable Technology. Boston, MA.: MIT Press.

Pringle, I. and B. Subba. (2007). "Ten Years On: The State of Radio in Nepal". UNESCO. http://portal.unesco.org/geography/en/files/7991/11966615215State_of_Community_Radio_in_Nepal_abridged.pdf Accessed 5.2.2016

The Progressive. (2013). "ALEC's New Victim: Public Access TV". http://progressive.org/news/2013/03/181562/alecs-new-victim-public-access-tv Accessed 9.12.2015

Rennie, E. (2003). *The Future of Community Broadcasting: Civil Society and Communication Policy*. Queensland, Australia: Queensland University of Technology.

Rennie, E. (2006). Community Media: A Global Introduction. Oxford, UK.: Rowman & Littlefield.

Scifo, S. (2011). "The Origins and Development of Community Radio in Britain under New Labour (1997-2007)". PhD Dissertation. London, UK.: University of Westminster.

Scifo, S. (2016). Interview by author. (via Skype). 22.1.2016

Shiers, G. & Shiers, M. (1997). *Early television: A bibliographic guide to 1940*. New York, NY.: Garland.

Shipman-Wentworth, S. (2014). "Pervasive Internet Surveillance - Policy Ripples". Internet Society Policy Blog. https://www.internetsociety.org/blog/public-policy/2014/06/pervasive-internet-surveillance-policy-ripples Accessed 31.1.2016

Singer, A. (2013). "AM / FM Radio Is Already Over, And No One Will Miss It". http://thefuturebuzz.com/2013/07/16/am-fm-radio-is-already-over-and-no-one-will-miss-it/-sthash.NR6zJmHe.dpuf Accessed 31.1.2016

Starr, J. (2000). Air wars: The Fight to Reclaim Public Broadcasting. Boston, MA.: Beacon Press

Sterling, C. and J. Kitcross. (2002). *Stay Tuned: A Concise History of American Broadcasting*. Mahawah, NJ.: Lawrence Erlbaum and Associates.

Sterling, C. and M. Keith. (2008). *Sounds of Change: A History of FM Broadcasting in America*. Chapel Hill, NC.: University of North Carolina Press.

Timescape. (2009). "Community Television Policies and Practices Around the World". http://www.vcn.bc.ca/cmes/1pages/Community-Television-Around-the-World.htm Accessed 10.12.2015.

Tracy, J. (1996). *Direct Action: Radical Pacifism from the Union Eight to the Chicago Eight*. Chicago, IL.: University of Chicago Press.

Valentine, S. (2013). "Mandela's Legacy of Media Freedom Stands its Ground". Committee to protect Journalists. https://cpj.org/2014/02/attacks-on-the-press-south-africa.php. Accessed 1.12.2015

Varga, D. (2016). Interview by author. Budapest, Hungary. 29.1.2016.

Witherspoon, J. et al. (2000). A History of Public Broadcasting. Washington, DC.: Current.