Freedom of the Ether or the Electromagnetic Commons? Globality, the Public Interest and the Multilateral Radio Negotiations in the 1920s

Author(s): Daniel Gorman, York University

New developments in technology and communication have been at the forefront of globalization in the twentieth century. They have helped make the world a smaller and more interconnected place. Perhaps the most important new communication technology of the twentieth century was radio, which allowed for mass communication over large distances. The introduction of radio made possible later communication technologies such as television and the Internet, and is thus of key importance for the history of globalization. These discussions signified a break from a "pre-global" era bound by national sovereignty and limited individual autonomy, and pointed the way towards a more open and global world society.

As the world increasingly relies on electronic transmissions for all manner of purposes, the use and regulation of the frequency spectrum through which such transmissions are carried has become an issue of great, and global, importance. The global use of the spectrum was a problem first identified in the early 1920s. The electromagnetic spectrum, otherwise known as "the airwaves," is a renewable, though limited, natural resource. Frequencies (wavelengths in the older usage) refer to the number of times a periodic occurrence (such as the cycle of a carrier wave) occurs within a given interval of time. The many new radio stations which quickly emerged in the 1920s often overlapped on the narrow dial, creating mutual interference in the form of static. At best, such interference threatened to curtail the cultural and financial potential of broadcasting; at worst, it was a threat to public safety, drowning out distress and navigation transmissions.

The international community addressed the challenge of mutual interference, and more broadly the rise of radio rights, in the early decades of the twentieth century. The key event in this process was the 1927 International Radiotelegraph Conference (IRC) in Washington. The delegates achieved a workable compromise between two positions: 1) that the frequency spectrum was a property like any other, best left to the laws of supply and demand; and 2) that it was an international "commons," a "public good" to be regulated for the use and benefit of all. By agreeing to define the spectrum as a property which belongs to no one, and which may be appropriated as private property within regulation, the delegates averted what the ecologist Garret Hardin famously called "the tragedy of the commons," the abuse through overuse of a shared property. In an interwar environment marked by political tension, the global agreement on frequency rights stands out as a notable triumph.

The IRC was preceded by international agreements dealing with issues such as safety at sea and the use of radio during wartime. The delegates at the IRC built upon these agreements when confronting the technical and political problems of broadcasting. The most important aspect of the IRC was the division of the frequency spectrum (the "radio waves") according to service. Thus, broadcasting was permitted at certain frequencies, maritime distress calls at other frequencies, and so forth. Nations were still free to allocate radio rights within their jurisdictions as they wished, so long as they adhered

to the frequency table established by the IRC. The frequency allocation table devised by the delegates represented a compromise between the wishes of North American governments, who favoured private radio rights, and much of the rest of the world, which favoured public rights. The IRC also established provisions for long-distance broadcasting. This practice was important to imperial powers, especially the Dutch and the British, who used it to communicate with their colonies. The colonies themselves, however, were not represented directly at Washington, leading some critics, both then and now, to conclude that the rules unduly favoured Western nations.

The changes embodied in the IRC, and more broadly the negotiations over frequency rights in the 1920s and 1930s, signified a shift from international coexistence to international cooperation and interdependence. Radio quickly assumed its place among the state's tools of information management, while also creating a new and profitable medium for dissent, resistance, and the preservation or, indeed, creation, of local autonomy. The inherently "global" nature of radio necessitated a global means of regulation. This process was certainly uneven, favouring industrial over colonial states, yet it nonetheless created a truly global medium.

While the IRC delegates represented national interests often at odds with each other, they were nonetheless forced to shift their thinking about the problem of mutual interference from the national to the global. Current debates about the potential for Western-dominated mass communication to impose Western culture on the rest of the world would be impossible if such a global arena had not first been created. In this sense, the process of increased global radio regulation in the interwar years led the way to present debates about globalization, where hopes and fears of the creation of a global culture coexist with increased efforts to affirm or create new local or autonomous identities.
