

## ***Interferences, the territories of analog and digital radio.***

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Reflecting today<sup>1</sup> upon digital radio merely consists in questioning our practice of a system to which we are not yet accustomed. This turns out to be even more difficult a task when what we are calling “Radio” does not fit the same definition for everyone, whether we are talking about technical apparatuses, legal organization or sound art. If we can actually discuss either the conditions of access to radio contents or the radiophonic quality of media contents, it yet seems difficult to have a transversal view. From these multiple points of view as well as through the multiplication of technical platforms, it does not feel so sure that the future of radio will be that of a single-media system, of which the homogeneity would have to be maintained by the somewhat artificial idea of an “augmented radio”, allowing the preservation of our listeners' habits while taking multimedias and hypertext possibilities from the Internet.

In order to get a better understanding of the issues of today's radio mutations, then, it seems important to examine the paradigms that are giving their shape, as two distinct systems and two distinct ways of understanding media communication, to the analog radio on one side and to the digital networks on the other, more precisely to the FM Radio and the Web.

### **Radio-instrument**

The general movement of radio broadcasting towards digital technology is not only a matter of adding new possibilities to media access, but also marks the disappearance of a body of analog transmission's idiosyncrasies: interferences, statics, empty spaces in the broadcast band and the fickleness of analog transmission... As many distinctive features which, if they are not exactly useful to program access, constitute a big part of the radio we are used to listen to. And as many distinctive features which, undoubtedly, have given shape to our habits as listeners as much as to our radio culture.

The improvements of analog technology have made it possible, to some extent, to cover these unwanted disturbances, but they never stopped us from thinking that a radio is a piece of equipment that starts with hum and hiss. Parallel to that part of history, artists and musicians of the 20th century have appropriated radio, not only as a system allowing the broadcasting of soundworks but the receiver as well, turning it into a genuine instrument with its specific “scale”. At the beginning of the fifties, the democratization of transistor having made the equipment smaller and easier to handle, radio receivers have made their way into the instrumentarium of John Cage or Karlheinz Stockhausen, radiophonic sources becoming a musical matter of its own, gathering signals and interferences in a common *plasticity*.

This particular “plasticity” of the radio-instrument is not only made of the introduction of a new range of electroacoustic noises into music: using radio signals, Stockhausen primarily adds a new range of musical gestures in the scores of pieces such as *Spiral* or *Kurzwellen*, with the intention of making interpretation more “intuitive”. Just as well, Cage is interested in radio for the randomness

<sup>1</sup> This article is taken from a lecture given at the symposium *Vers la Post Radio (Towards post-radio)*, GRER, Paris, 26 – 28 November 2009, Sorbonne/INHA. Translation by the author.

of its use. He explains as early as 1951, speaking about *Imaginary Landscape No.4*, that using radios in the composition have made it possible to take his research on indeterminacy further than he had been able to do in *Music of Changes*<sup>2</sup>.

## **Radiophonic matter**

If the radio-instrument perpetuated in contemporary music, carrying on an interferences and statics aesthetic of its own, it also witnesses fundamentally non-documentary uses of the radio system, which are yet made possible by radio itself. In other words, uses that are not to be reduced to the only issue of radio contents and the conditions of their access. The musical approach to the radio medium draws us, more broadly, to consider the diversity of the radiophonic *matter*. As for Cage, interferences and proper broadcasts are to be considered, just like the physical reality of Hertzian technology, as variations in the intensity of a signal which become, as part of a composition, varieties in the range of the radio-instrument.

More recently, musicians like Keith Rowe or Lionel Marchetti have appropriated such a musical use of radio, exploring the waves so as to create fictitious landscapes, populated with fugitive voices, blurred or uncertain, chance encountered for just a moment<sup>3</sup>. In their cases, it is not about interfering with the conventional rules of musical interpretation and composition anymore, the use of radio in Rowe's improvisations and Marchetti's electroacoustic works being more a way of seeking out dramatic, aesthetic and poetic features that are already part of our listening habits and rooted in our radio culture. As a matter of fact, there is no need to be a musician to experience radio as such a drift within the frequency waves instead of just tuning in to one radio program: at least once, we have all wandered about the signals as if we were exploring an altogether familiar and unpredictable space, whereas it was for fun, testing the equipment or playing a musical quiz...

If, however, it remains legitimate to define radio through its broadcast programs and media contents rather than through the imperfections of analog transmission, the absence of interferences in the conditions of access to digital medias allows to make a distinction between *the reception of a signal* through analog systems and *the consultation of a content*, which is more similar to the documentary use we make of digital networks. This first differentiation between two modes of media access, two distinct systems which even while carrying identical contents imply specific usages, makes it possible to distinguish, between analog radio and the Web's digital networks, two ways of understanding and structuring the space of media communication and two ways of “browsing” into it.

## **The landscape of analog radio**

Beyond a musical work which purpose was to sound different each time it is played, the reprise of *Imaginary Landscape No.4* nearly 60 years after its premiere<sup>4</sup> reveals more broader transformations in the technological, media and social landscape: radios are not playing the same thing and not in the same way. That term of “landscape”, as it appears in the title of Cage's work, might be the most accurate to describe the media space of analog radio.

2 John Cage, *For the Birds* in *Conversations with Daniel Charles*, 1984, Marion Boyars.

3 Cf.: Lionel Marchetti, *Noord Five Atlantica*, Césaré, 2006; and Keith Rowe/Günter Müller/Taku Sugimoto, *The World Turned Upside Down*, Erstwhile, 2000.

4 Given at the Tate Gallery in London, August 2009.

Cage's scores for *Imaginary Landscape No.4*, *Speech* or *Radio Music* rely on the randomness of reception, using voices, musical bits and statics as well, the "imaginary landscape" forming with the indeterminate exploration of the waves by performers reacting to whatever the radio gets. Through the example of such works, one might represent the broadcast band as a continuous expanse, of which variations in the signal's intensity constitute the reliefs. The interface of the technological system that the tuner knob is, is the vehicle with which we are moving through the radiophonic landscape: wandering amidst frequencies or reaching the specific "location" of one radio station.

The media space of analog radio, then, has its particular geographic consistency, which is itself fluctuating according to our position within the real space. Essentially, the radio landscape as we experience it is shaped by a succession of full and empty spaces, signal on or off, but which is, at first, a very concrete space as the extent of the bandwidth: a firstly virgin space over which the properly territorial issues appear as it is colonized by radio signals. And as a matter of fact, the crackling sections between each station on the band are not "nothing" but, not so figuratively, "untilled" parts in the radio territory.

### **The assemblage of digital documents**

For a long time, we are familiar to the promotion discourse of the Internet inviting to browse and "surf" it. Yet giving a closer look to such a spatial representation it happens to conceal a very different structure of online medias. In opposition to the *landscape* of radio frequencies, there is no such thing as an empty space on the Web, an *untilled* portion of network space that would not contain any data, because browsing online does not consist in going around the surface of hard disks but is about, properly speaking, calling documents that will successively display on one's computer. From that point of view, online consultation might be understood as a purely documentary practice. Some sociologists actually set this "documentary hypothesis" as a foundation for their study of online usages and interactions<sup>5</sup>. Therefore, the network of digital data to which we access with the Internet might not so much be represented as a landscape, but rather as an *assemblage*, formed by the juxtaposition of interconnected documentary contents for which we are successively seeking. Its geographical – or rather "*a-geographical*" – reality has more in common with the vertical piling up of search engines' lists than with the horizontal continuity of the analog broadcast band.

Moreover, what differentiates the two kind of spaces is that if the concrete space of analog radio pre-exists its colonization by signals, the virtual space of digital network documentary contents is constituted by the documents themselves, and expands each time new data is set online. Virtually, the network space is infinite where, fundamentally, the analog bandwidth is a constrained and limited space. Through these specific features, the media spaces of analog radio and digital networks appear as distinct representations of the territory, to which correspond distinct modes of organization, control of practices and exertion of authority.

### **A political landscape**

The analog radio territory is altogether continuous in space, permanent through time and variable in function of the real territory. Alike the real territory, it is also limited and constrained, and therefore

5 Cf.: Fred Pailler, *Les sites de rencontres sur Internet, quelle sociabilité? (What sociability is at issue in online dating?)*, unpublished thesis.

exposed to similar structuring issues: that is, primarily, its occupation or abandonment, its appropriation or sharing, its dividing into common or private areas.

The radio space is structured according to different ranges of frequencies, which reflect the different organizational modes of our lives in public or private spheres: public, common or shared spaces of CB and Shortwave radio, institutionalized or privatized spaces of AM and FM radio. The analog landscape (this is also true of television) is both *economical* as it shapes up according to variable possibilities of access to broadcast technologies, and *political* inasmuch as an authority processes the division and organizes the control of the media territory, apportioning the space into parcels for each of which specific legal apparatuses are adapted, in correspondence with the portions of real territory that each type of broadcasting is covering.

Yet this legal organization of the media territory might not appear right away to FM radio listeners, as once the radio receivers built according to these dispositions, the listener might equally access to any signal within the available ranges of frequencies. This is yet another distinction between radio reception and Web consultation, the last possibly implying direct confrontation with the legal frame when accessing reserved or protected sites, paying contents, sites forbidden to minors, etc. Whereas legal dispositions on the Internet are constantly addressed to the users, the legal frame of radio only concerns the *producers* of signals, and it is only by reappropriating the broadcasting technologies, using home-made equipment, that some artists have been able to set the territorial issues of radio to light.

### **Radio as a public space**

When Tetsuo Kogawa or John Duncan appropriate locally the frequency range of FM radio or television for showing their works, they are also testing the political consistency of the media systems, making proper territorial issues and legal frames to appear. In Tokyo in the mid-eighties, Duncan's hacking broadcasts<sup>6</sup> were occupying the national television channel after program closedown, the performance was broadcasted over one neighborhood and limited to 12 minutes in order to escape police intervention. Such actions are to be understood as both in filiation with the history of Free Radios activism and that of happening: infiltrating simultaneously the public and media spaces. Such examples makes it tempting to draw a parallel between the structuration paradigms of the public space and those composing the landscape of analog medias: on both sides a distinction is made clear between the production of the space, which is submitted to an authority, and the use of that space, which determined by a norm. Duncan's hacking broadcasts or the DIY production of micro-transmitters by Kogawa<sup>7</sup> make it possible to reveal and question this authority only insofar as such works are, literally, *productions of space* and allow the user to shift over to the side of production.

With the appearance of Free Radios in the mid-seventies, the calling into question of the hegemonic constitution of the radio territory through states monopolies was bearing the same issues of appropriating the media production systems. Since then, the *libertarian* that was animating the first pirate radios has somehow dissolved into the liberalization of FM Radio, primarily, however, it was bearing the necessity of appropriating the means of production and the reopening of media spaces which Duncan or Kogawa have later retake hold of on a micro-political level.

The histories of Radio Alice in Bologna, and later Radio Tomate in Paris, are properly territorial

6 Cf.: <http://www.johnduncan.org>

7 Tetsuo Kogawa, *Microradio Manifesto* <http://anarchy.translocal.jp>

matter: incursions in the media space being inseparable from actions led in the public space (public space sit-ins, squatts, demonstrations...). For Félix Guattari however, the “revolutionary work of the Free Radios” was primarily a “*de-territorialization*”<sup>8</sup> process. It was not about opposing a “counter-hegemony to the dominating media discourse”, content against content, but to “trigger the process of deconstruction of the media system by making the subjects of enunciation to proliferate”. In other words, to substitute the monopolistic or privatized representations of the territory for a conception of radio as an actual public space, to which a democratized technology allows to appropriate the conditions of access.

Through this multiplication of subjects of enunciation producing the media space, Franco Berardi sees the foreshadowing of “the techno-nomadic reality of networks”, in a “*rhizomatic*” perspective. Beyond the differentiation between two communication systems, then, there would be a filiation link from one to the other: digital networks providing with the possibility of occupying an enunciation position within the media territory that radio was eventually unable to offer. Yet remains the question of how the exertion of authority over media production is, in its turn, *reterritorializing* within the network, in other words: how a new technological paradigm is reconfiguring, conditioning the position and status for enunciation online.

### **Internet or the communication of private spheres**

For a proper understanding of that shift in discourse, it is especially interesting to examine the media activist and subversive movements. It is indeed along the history that goes from Free Radios to the emergence of online *hacktivisms* that the filiation is the most explicit. A straight relationship that has enabled the protagonists of those movements to acknowledge the structural and paradigmatic shifts in the media territory, probably long before the institutional milieu started talking about the issue.

In that respect, the artists of Critical Art Ensemble have theorized in manifestos published in the nineties<sup>10</sup> the way power was, in its turn, growing nomadic and re-territorializing in the fragmentary reality of the network. According to them, if the traditional fortresses of centralized power have maintained their symbolic permanence, they have actually become diffuse and invisible authorities embodying an organic model. Subversive possibilities of media space infiltration have thus to transform as well, and leave the battlefields of the radio territory in order to become computer “viruses”.

Among the idealizing representations that are structuring the Web, the issue is not that of media property anymore, neither than that of ownership of the means of production. Starting again from the hypothesis of a properly documentary constitution of the Web, one might state that the media territory of the network is precisely based on the ability for each one to hold a position of subject of enunciation within the network, in other words: to be a *co-producer* of the documentary assemblage and therefore of the media territory itself. Thus, within the infinitely extendable space of digital networks, ownership is postulated as part of the condition of access to the media, each user co-producing the assemblage being primarily the owner of its online “address” and “domain”.

8 Félix Guattari, *Des millions et des millions d'Alice en puissance (Millions and millions would be Alice)* foreword to *Radio Alice, Radio Libre*, Collectif A Traverso, Laboratoire de Sociologie de la Connaissance – Jean-Pierre Delarge, 1977.

9 This quotation and the following: Franco “Bifo” Berardi, *Les radios libres et l'émergence d'une sensibilité post-médiatique (Free Radios and the emergence of a post-media sensitivity)*, Multitudes, 2006.

10 Critical Art Ensemble, *The Electronic Disturbance*, Autonomedia, 1993 and *Electronic Civil Disobedience*, Autonomedia, 1996.

Therefore, the regulating function of authority has clearly changed: whereas it was, in the analog radio space, partitioning the open space into private areas, it is now determining and organizing communication from private spheres to private spheres. Ideally, the law disappear behind a self-regulation principle, which is embodied in the user/producer at every point in the network. And as a matter of fact, legal issues are shifting to the question of online identities' integrity and intellectual property of contents.

### ***Post-radio ?***

It seems eventually necessary, before questioning the development of contents of a given media system, to examine the enunciation regimes that system enables. From that point of view, current radio issues, through all the available apparatuses from FM and Shortwave to Webradios and digital broadcasting might be those of the plurality of positions and statuses radio is able to provide to people speaking and people listening...

Ultimately, the question of a “*Post-Radio*”, turning into the question of the radio's *post-enunciation*, might take us to consider the conjunctive future of analog and digital systems. The progressive abandonment of the first by major broadcasters being the opportunity, instead of letting it disappear to other ends, of recomposing a veritable public radio space, which would favor the proliferation of subjects of enunciation, just as Félix Guattari and Franco Berardi imagined.