When Crowdsourcing Meets Social Networks: a Return to the Future?

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Abstract

Audience participation is evolving. On the other hand, digital technologies also provide the means for listeners to create and develop content.This behavior leads to the concept of participative radio based on crowdsourcing, enhancing the opportunities for listeners' participation. But another tool, the social networks, also helps to shape new modalities for audience participation. Besides the vertical connection between radio stations and listeners, they establish a horizontal connection between their members. Such a horizontal connection creates a living entity made of listeners. This living entity is participative, active, connected, communicating and intelligent at the opposite of passive mass audience. But this collective intelligence will in turn open the door to new kind of structures such as collective and collaborative projects which structure is not only horizontal but also moving, evolving, or even discontinuous in time or in space because it is spread among all its the participants. We can find in this trend a development of grassroots participation and content appropriation by the audiences. Such a development is made possible and easier by digital technologies combining crowdsourcing and connection through the social networks.

Keywords: crowdsourcing, social networks, webradios

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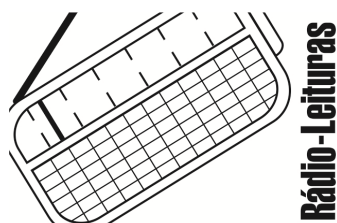
Introduction

Audience participation is not a new phenomenon in the radio landscape. But participation modalities evolve with the state of technology. From mails, phone, SMS, emails, forums, blogs, and finally to social networks, it extends over multiple platforms that allow radio stations to be permanently connected with their listeners and to establish a two-way relationship, encouraging listeners to more and more involvement and interaction.

On the other hand, technology also provides the means for listeners to create new radio content or to appropriate existing one, to change and develop them by bringing their own contribution and then seek to broadcast these new content.
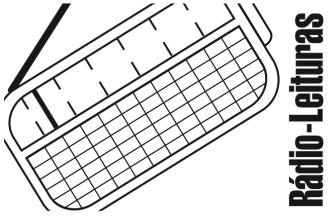
This behavior leads to the concept of participative radio based on crowdsourcing or radio made by its listeners. They can choose content either by personalization or by voting for content to be broadcasted. They can also produce content like podcasts, for example, which will then be diffused.

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The idea of crowdsourcing consists in submitting a task, a problem or a question to a group of people, not necessarily connected together, in order for them to provide a solution. Crowdsourcing offers also the possibility to divide a project into elementary tasks performed by each participant so that each one, bringing his individual contribution to the joint project, would operate like a collective intelligence. Internet is indeed the ideal ground for this kind of collaboration.

But the Internet is also the location of social networks that establish a horizontal connection between members.

What happens then when both concepts of crowdsourcing and social networks come together?

What happens when listeners who are also content producers are interconnected via social networks?

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What happens when the vertical connection that links the radio to its listeners/producers is completed with a horizontal connection between listeners/producers?

The aspect that will interest us here is the combination of these two concepts, both coming from the digital paradigm: crowdsourcing and social networks. The goal is to see how they can shape new models of radio.

We will study how social networks provide a collective and collaborative individual participation shaping a model of crowdsourced radio different from the vertical structure that we usually knows. This model implements a collective intelligence that appears in the context of a participatory networked economy and of a convergence culture.

1. The Importance Of Social Networks And Crowdsourcing

A first study (Living and Learning with New Media, 2008) shows significant results in the use of online social networks. Moreover, it also describes a networked participative economy. An important fact with online social networks is that they allow continuing a social network already set up in real life. This allows the network organization to continue and to perpetuate even when its members are not physically in the presence of each other. Clearly, the entry into the digital paradigm and the use of the new technologies that this paradigm offers, gives the opportunity to develop the social behavior of individuals. This is a purely social activity. This opportunity is called "friendship-driven practices" by the authors of the study.

Beside friendship-driven practices there is also an "interest-driven online activity". This activity implies a research activity and/or production of knowledge or digital content. These content are then shared between peers in order to receive feedback. This practice expands the social network to people outside the local
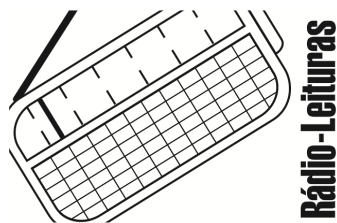
environment. Participants are rewarded with skills and reputation (the study cited here)

Two characteristics seem important here. The first one relates to the constitution of the social network. Firstly, we find the will to extend the real network on the internet. This shows the commitment to this mode of operation and the desire to continue to share and exchange even when people who belong to this network are not physically present. On the other hand we find the use of online social networks, not for the purpose of socialization, but for a creative or productive purpose. This shows that users appropriate technical means in order to change their way of interacting with the media. They were passive media consumers, they become active participants who are able to produce and propose content.

The second one is precisely the concept of participation: the social mode of operation is similar to the one in primitive societies described by Marcel Mauss in "the gift economy". The models described are based on the exchange of gifts. Similarly, in our case, the participants offer their time when they are involved in content production, and when they disseminate the content they receive a form of social recognition of their skills enabling them to assert their place in the network.

The question that lies behind these two types of behavior (friendship-driven practices and interest-driven practices) is what would happen if these two activities were conducted jointly. That is, the resulting network would allow the continuation of social activity through production and sharing of the created content. The productive activity would be the engine or the medium of the social activity. This study clearly shows the entry in a networked economy participatory described by Henry Jenkins.

At the same time, a study from the EBU "Public Radio and New Media Platform" focused on four European markets (UK, France, Germany, Sweden) and the USA highlights several trends:

- The decline of radio listening via broadcast AM/FM among the younger generations
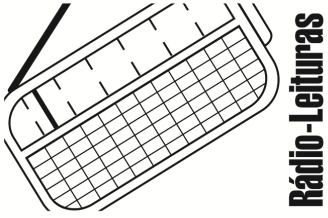
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- The growth of audio streaming especially when it is personalized and interactive like Pandora in the USA or Spotify in Europe. For example Pandora accounts for more than 50% of weekly online hours while Spotify follows the same trend in Europe where in Sweden it is more popular among young generations than public and commercial radio stations.

- Mobile listening through smartphones, radio and mobile apps is growing, either for interactive music services or radio listening

- The growing link between social networks and radio listening as the younger generations increasingly access radio via social networks such as Facebook, MySpace, Twitter and YouTube.
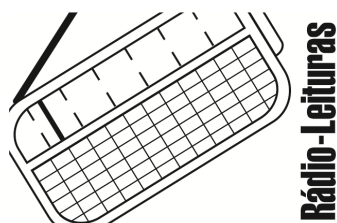
Moreover, among the winning strategies identified by this study three are interesting as far as participation and social networks are concerned :

- Take advantage of user-generated content and the "collective mind" of the listeners.

- Make creative and experimental use of social media

- Community building

So the attention is focused on listeners (their capacity to produce content and their will to be active listeners offering user-generated content) and community building (social media and collective mind).

From the results of this study we can link the popularity of music streaming services (new listening patterns) with crowdsourcing (user generated content) and community (collective mind).

Thus the two important concepts here are, firstly, the emphasis on audience participation in content production that is relying on user generated content and secondly the fact to build a community (community building). It becomes important to unite listeners around, creating a collective mind. A collective intelligence is emerging

behind this project. A collective intelligence is an entity defined by Pierre Levy as a group of individuals each of them possessing a part of the resources or knowledge. These fragmented inputs are put together in the realization of a collective project. This is what we end up by extending the analysis and by considering these two strategies together: a collective intelligence that implements the means to produce / distribute content, that is community generated content or crowdsourcing by a collective mind.

Crowdsourcing is the act of using mass collaboration enabled by Web 2.0 technologies. It can be defined as the act of delegating to a group of people (the crowd) a task that was formerly performed by specific individuals. The activity can be pursued individually as well as by groups of individuals. These groups then constitute an online community that will provide solutions. These are distributed problem-solving and / or production models. Crowdsourcing is clearly linked to the interest-driven practices highlighted in "Leaving and Learning with New Media."

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We are in a crowdsourced model when production involves audiences to create and offer content but also when they are asked to participate in the creation of a program by voting for proposals made to them. Listeners can for example vote for individual songs that will form a global musical program. These are two crowdsourcing strategies from the four identified by Jeff Howes, croudvoting and crowdcreation respectively.

Crowdsourcing is clearly linked to the interest-driven practices put in evidence in Leaving and Learning with New Media. Here we want to present a few examples of crowdsourcing. These models show how it is possible to embed crowdsourcing models to traditional radio models. We will see that it can implement the strategies identified in "Public Radio and New Media Platforms i.e. take advantage of user-generated content and of the collective mind of the listeners and community building.

- Listener Driven Radio

Listener Driven Radio is a crowdsourced service where listeners control a station's playlist by voting online. Using Listener Driven Radio, listeners request a song,
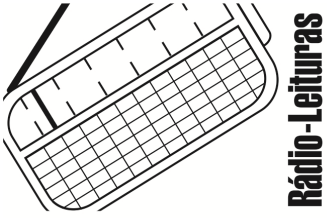
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they can also rate songs online and that input is used to automatically change over-the-air programming. The program constantly absorbs listener input, song votes, and comments on music, and automatically adapts radio station programming in real-time.

Listeners help to shape the sound of the radio station and in general the sound of radio station with which it partners. For example, Clear Channel Communications, CBS, Citadel Media, Harvard Broadcasting, and a number of major broadcasters in the USA, Canada, and Europe are using Listener Driven Radio's technology to give audiences the ability to influence on-air programming.

- BYO.fm

BYO.fm - for "Bring Your Own - streams music that listeners already own, and add in a customizable selection of news, sports, and weather reports, and even a choice of voice announcers, to create personalized online radio stations.

- Jelli

Jelli is a crowdsourced radio platform. The service evolves entirely around a playlist of songs managed by users in real time. It allows listeners to determine a radio show's or station's musical programming by interacting online. Listeners request music, and vote songs "up" or "down," online. The songs with the most votes are broadcasted. Jelli was born as an online service only, but it now partners with broadcast radio station offering crowdsourcing component.

- Kyouradio

In 2005, San Francisco's 1550 KYCY, an AM station, became KYouRadio, a podcast-based station. Podcasters are invited to submit content for broadcasting. The station plan is to get all its programming from podcasts. The station is broadcasted in
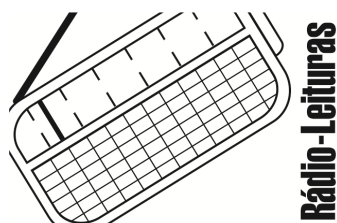
the San Francisco area on 1550 KYCY-AM, and streamed worldwide via kyouradio.com. But KYouRadio only rebroadcast podcasts meaning that it is not possible to download podcasts.

These examples highlight the following points:

- Models are vertical to the extent that they show either a bottom up or a top down strategy.

It is bottom up when listeners upload podcasts that are rebroadcasted by radio as in the case of KYouRadio. This is also what happens in the case of BYO.fm as listeners offer their own music.

It is top down when the audience choose the program from a selection proposed by the radio, as it is the case with Listener Driven Radio, when listeners ask a particular kind of music. But the strategy becomes bottom up as soon as listeners are asked to vote. The vote here is equivalent to offer content as in the case of podcasts with KYouRadio.

The same applies to Jelli which follows a logic both top-down ad bottom-up. It is top-down since the playlist is chosen and by the radio station and listeners ask the content they want from this selection and it is bottom up when listeners express their opinion on the currently broadcasted choice by voting. Voting gives them the power to change the program.

- However, the models are not explicitly set on a horizontal connection between listeners. The link is still vertical in that the connection is made between the radio station and each of the individual participants, but listeners are not related with one another.

Certainly, there is a community of listeners but we can not yet speak of a collective intelligence because the choice is made by the aggregation of votes, so by the majority, from an external body. Certainly, each participant possesses a small part of the resources and information of the overall content, but they are not connected.
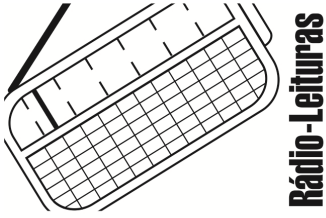
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They form a community of listeners who actively participates in the development or choice of programming but at this stage it is not yet fully exploited because participation is still individual. The members of the community cannot interact with one another and act collectively.

It is nevertheless an attempt to build a community, but we must now proceed to use this community. We have just seen the contribution of crowdsourcing in the sense that crowdsourcing can build a community. Now we focus on the contribution of social networks that will allow making a full use of this community and using it at the best of its possibilities.

2. The Contribution Of Social Networks

We have just seen that crowdsourcing creates a community of active and participative listeners and that interaction takes place through a vertical connection between this community and the radio station that uses its contribution. The online social networks will add to this vertical link a horizontal connection between the members of the community. This link will enable them to interact with each other and with the program to which they contribute.

Specifically, the contribution of online social networks is characterized by the possibility to share content within a community of listeners. It also enables a simultaneous and collective listening among the group and a collective interaction during the listening experience.

Sharing content is similar to distribution of content within a community of listeners. In this context each member can share what it is listening to with the others and the others can reciprocally add content they want to share. At the same time this sharing contributes to create a shared playlist, i.e. the production of a collective global content. Examples:

- Facebook Connect
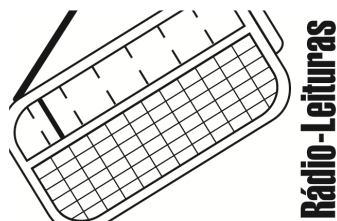
Facebook Connect is a set of applications from Facebook that enables Facebook members to log onto third-party websites, applications, mobile devices and gaming systems with their Facebook identity. While logged in, users can connect with friends and post information and updates to their Facebook profile.

Applied to radio stations Facebook Connect enable listeners to share what they like or what they are listening to and it hence contributes to create a first attempt of collective experience.

Last.fm has already added Facebook Connect. This system allows users to link their Facebook accounts to Last.fm. Users are able to import artists they've "Liked" on Facebook into their Last.fm collections. The service also offers a "Friend Finder" tool which adds the ability to create and expand the social network.
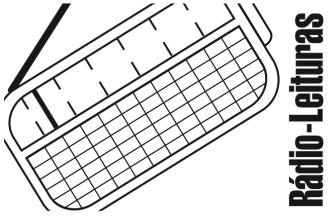
- Twitter & Rdio :

On December 2010 when Twitter expanded its integrations with third-party multimedia services it also offered a link with Rdio. Rdio is an online music subscription service created by Skype founders Niklas Zennström and Janus Friiz. When a subscriber tweets out a song, Rdio members can listen to the full-length song. The other Twitter users can hear thirty second song previews. It is also possible to share music with "friends" by linking the Twitter account to Ping.

- MOG, a subscription music service that offers on-demand music features as well as customizable web radio streams, has added a Facebook integration to its beta HTML5 web player. Facebook integration recommends new music to users based on what artists they have "liked" on the social network.

These examples relate primarily to online music services but they help to identify that it is possible, thanks to social networks, to create a community of listeners based on shared content.

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Up to that point social networks helps building a collective listening experience. However, the other members' listening experience is still time delayed. In a first stage a listener chooses content, then it shares this content with other members who can, in a second stage listen to it. The process is repeated till a collective content in the form of a shared playlist is created. The content is created collectively and shared or distributed but it is never listened to simultaneously.

Other examples show that it is possible to create a collective listening experience that is at the same time simultaneous, as it happens with a radio program.

- Spotify and Facebook have partenered to deliver a music streaming service on the social networking website (May 2011) Users will be able to stream Spotify's music library via Facebook. As It is hosted on Facebook, the music service will include a function that lets Facebook users listen to music simultaneously with their friends over the social network.

An alternative to the partnership with social networks is to evolve into a social network. This is what happens with Pandora. Pandora, the online music streaming service based on the genome project, chooses for each user content that are close to what these users have been listening to. Pandora started with music but it is expanding beyond as it has been offering, since May 2011, personalised comedy streams (through the "comedy genome project") with the opportunity in the long term, to include also sports, talk, news and other forms of content.

The new Pandora's web site emphasizes social features and allows users to comment and share content through Pandora much more easily. They can also see, via a music feed, what their friends are listening to on Pandora (like Rdio's social features, or Facebook's news feed). So Pandora is becoming a social network.

Previously we have seen that Jelli allows users to select the programming by voting for content to be broadcasted. During the broadcast, they can still affect real-time programming by voting for the continuation or discontinuation of the broadcast.
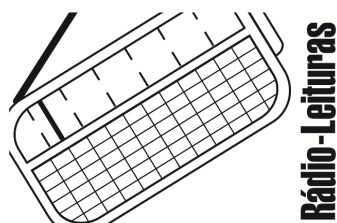
Jelli also allows participants to build communities that can collectively choose programming through their vote. Jelli provides these communities with a chat room where the members can socialize, share their opinion, express comments, lobby for their favorite songs or organize a playlist created and controlled collectively by the community.

Up to that point we have seen that crowdsourcing and social networks lead to the creation of a community acting like a collective intelligence in the way that all its members are linked and can interact with one another in order to produce collectively a global content. This content can share among the community's members who can also listen to it simultaneously.

But such a community is disseminated and not properly structured. The last stage would end up in the constitution of a place, be it virtual, showing a formal structure and rules.

3. Crowdsourcing, Social Networks And Virtual Places

A listening room is a virtual space where people gather to play and listen to music. Each participant, each one in his turn, chose the music it likes and plays it to the other listeners who can express comments and vote for what they are listening to. There are many examples that show up the same characteristics and the same operating mode like for example turntable.fm, Rolling.fm, Listening Room or Outloud.fm.

The first feature one notices is the ability to collectively listen to the program, untill now these services allowed to share a selection of music with peers but not to listen to it simultaneously and collectively. It was possible to transmit a selection of content but each member was only able to listen to it individually and moreover the listening was time delayed.
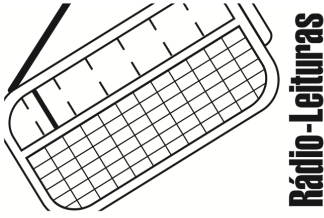
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The collective listening experience is now possible because the participants are linked together and form a social network. More precisely, the listening room is a social network that allows participants to be virtually in the presence of each other.
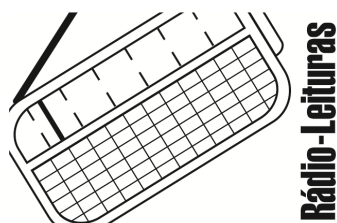
This feature is new not only for music listening sites but also for patterns of radio structures where listening is certainly simultaneous but where listeners are not connected and cannot communicate with each other, the structure remains vertical. Clearly, this feature comes from the contribution of social networks.

The second characteristic is that the program is created collectively by the individual participation of each user. Indeed each participant brings to the listening room the music he likes and submits it to the others by playing it. This is repeated every time a player takes his turn. Thus, each individual contribution helps to form the collective content.

The interesting aspect is the absence of a higher authority that decides what will be released as it happens in the crowdsourced model of radio that we already know in which content producers submit their production an a decision-making body at a higher decides which content will be broadcasted. It is a vertical model that separates production and distribution.

Here, the model is horizontal. This means that on the one hand there is no separation between production and dissemination. The participant whose turn it is to play music proposes a song (or content, in a more elaborated version) and by this single act is also the one who decides to broadcast it.

Moreover, on a global level the community members propose and decide, produce and broadcast. In addition all participants are on the same level as everyone takes its turn and everyone can comment and rate what it is listening to, thus contributing to the choice of the overall program. All these participants are connected to each other horizontally through social networks.

Another significant feature is the way the program is developed. Such a program is built with small individual contributions, each one bringing its own resources to the collective project. We obtain here what Pierre Levy calls a collective intelligence. A community where each one owns a part of the resources, music in this case, needed to produce the overall objective. So we find the realization of the issue mentioned earlier on the combination of social and productive activities within the same network.

Conclusion

Of course we will not assert that online streaming services or online listening rooms are radios. But these models are the result of a combination between the use of social networks to connect users and crowdsourcing and they lead to a horizontal structure, a network made up of users in which individuals collaborate in the collective content production and distribution. Moreover, these models share some characteristics with radio: collective and simultaneous listening, a community of listeners connected to the radio station but now each listeners belonging to the community is connected with the others through social networks.

It is the reason why it could be worth considering extending and applying these patterns to other contents than music. This could lead to new patterns of radio structures, networks of listener-producer-broadcasters of content and program based on crowdsourcing.

The creation of a living entity made of listeners, participative, active, connected, communicating and intelligent at the opposite of passive mass audiences and also different from individual listeners requesting or offering personalized content, but still isolated.

Will this entity still need the kind or Radio model that we already know it? Will it not depart from that classical model to create a new one more similar to its own
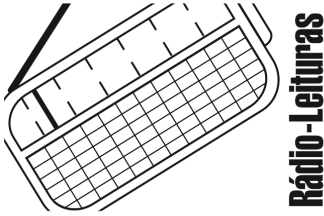
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image? A collective and collaborative project which structure is horizontal but also moving, evolving, or even discontinuous because it would be disseminated among all the participants, but at the same time connected on the Internet through the social networks?

We can see in this trend of internet radios or internet broadcasting the ideas of grassroots participation and appropriation of contents that had sprouted with the « radios libres » in France in the 80s for example and that digital technologies, combining crowdsourcing and connection through the social networks, make now possible and easier. This movement was seen as changing the future of radio because it involved a break with the old model. Are we, then, back to the future?

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