

Intercultural Dialogues

Exchanging sounds to create hybrid spatialities

Luciana Roça¹, Marcelo Tramontano²

University of Sao Paulo

¹www.nomads.usp.br

¹lucianaroca@usp.br; ²tramont@sc.usp.br

Abstract. *This paper discusses sound and space instances supported by practices pertaining to the cultural action Intercultural Dialogues. This action is part of a larger project named Hybrid Territories, which involves digital media, communities, cultural activities, and the proposal of public policies, funded by FAPESP (São Paulo State Agency for Research Funding), Brazil, by means of a partnership with the Arts and Culture Bureau of the city of São Carlos. The cultural action in question is based on the construction of hybrid spatialities by the use of live-stream communication of sounds, thereby favoring the exchange of sound readings between São Carlos, Brazil, and Lüneburg, Germany.*

Keywords. *Sound; Space; Hybrid Spatialities; Digital Media; Cultural Actions.*

INTRODUCTION

This paper comprises reflections on the cultural activity Intercultural Dialogue, part of the public policy project “*Hybrid Territories: digital media, communities, cultural activities*” [1]. The purpose of this project is to foster the collective construction of hybrid spatialities, by combining real and virtual instances in urban areas. Within this scope, the Hybrid Territories Project seeks to bring together different social realities by digital media, exploring diversity and different outlooks. Hybrid Territories is a project conducted by the Center for Interactive Living Studies at the University of São Paulo, Brazil (Nomads.usp), in partnership with the Arts and Culture Bureau of the city of São Carlos and funded by the São Paulo State Agency for Research Funding (FAPESP).

The purpose of the Intercultural Dialogues action was to promote a remote non-verbal musical dialogue by digital media, via livestream. During this activity two music bands interacted simultaneously

and remotely by producing sounds, thus providing interpretations on space. In addition to promoting exchanges among different disciplines, the action also made it possible to ponder upon space-sound relationships and to explore sound communications by digital media.

In respect to technical aspects needed to organize the event, both Brazilian and German teams worked together at a distance. Polycom teleconferencing equipment was employed as proposed by Leuphana Universität; this equipment has integrated stereo audio and image data solutions for synchronous communication and transmission. There are open source technologies that could fulfill the same functions. Although it can only communicate with equipment made by the same company, in a closed system, this equipment was chosen due to the fact that it was available at both universities.

While Aquarpa was in Brazil, Parashurama was in Germany. Whereas sound was produced locally there was also the possibility of interaction at a distance via the Internet. Since the music bands were supposed to conduct spatial readings of their own venues and transmit them by means of sounds, sound instances were created so as to directly relate to space: Aquarpa's local sound was related to the railway station space in São Carlos; Parashurama's sound was related to the Lüneburg railway station space; and both bands' sounds were heard at each other's venues, transmitted via the Internet. Each group's sound and spatial interpretation were brought together by the use of digital media by simultaneous exchange of sounds. In order to achieve this goal, the following script had been defined: two ten-minute cycles when each band presented a solo performance, like a paused dialogue. So these two cycles resulted in forty minutes. Then, Aquarpa and Parashurama communicated with each other synchronously for more than twenty minutes. During the first cycle, the two bands played freely, whereas in the second cycle the bands should take each other's performance into account. It is well-known that system latency is inevitable, so music without a set rhythm and beat per minute was employed, and silence was also considered as a valuable musical aspect in simultaneous communication. The methodology used to document this event comprised photography and video-making in Germany and Brazil. Aquarpa's mixed sound and the sound transmitted from Germany were also recorded.

In order to accomplish this end, this action involved the efforts of Leuphana Universität, at Lüneburg, Germany, and University of São Paulo, at São Carlos, Brazil. Intercultural Dialogues was held by means of a partnership among both universities, the German band Parashurama, from Hamburg, the musical research group Aquarpa (from Federal University of São Carlos) and the Arts and Culture Bureau of the city of São Carlos. Among the goals of this action was the promotion of reflection on space-sound relationships by exploring different digitally-mediated sound languages.

SOUND THROUGH SPACE, SPACE THROUGH SOUND

According to Holmes (1985), "*sound is produced by air pressure waves that cause the eardrum to vibrate. These vibrations are converted by auditory nerves into impulses that the brain recognizes as sounds*". As it can be defined as the result of vibrations, perceived by the human ear and propagated in this way, sound also promotes the interaction with the physical space. This interaction is twofold: on the one hand, the characteristics of sound are altered by the characteristics of physical spaces and, on the other hand, sound itself interferes in how physical space is perceived. This relationship between sound environments can be examined apart from its acoustic aspects, given the complexities of space-time relationships brought about by sound creation, mediation, and listening interfaces. This sound intervention was also possible due to virtual sound space amplified locally, devised by the music bands with the help of sound technicians, by means of local capture, reproduction, processing, and amplification processes.

By the use of technology and technique, listeners can transcend the immediate (unmediated) acoustic environment in order to participate in another acoustic environment as a mediated extension, where the act of communication is also inscribed in another environment (Sterne, 2005). From this perspective, sound disembodiment by means of interfaces also entails spatial relationships, because sound is no longer restricted to a given time and space. Indeed, since the late nineteenth century, sound has been transmitted, recorded, stored, simulated, and altered, among other processes, which were much exacerbated more recently by digital media. A new type of sound can be now promoted, manipulated, and organized in a manner inconsistent with the possibilities allowed by acoustic physical space. Today, sound is provided virtually and its performance is often oriented to practices and procedures conducted by sound interfaces. Thus are virtual sound spaces created, i.e., they are the result of sound creation, simulation, and mixing, which allow

these sounds to be transmitted to different venues, not consistent with their original concrete instances, transformed by sound interfaces by means of adjustments, e.g., volume, panning, equalization, and compression, made possible by electronic and digital media.

Figure 1
Aquarpa's musician playing
railway objects. São Carlos,
Brazil.



Processes established for sound interfaces can also change sound production practices, as well as how they relate to space. Between producer and listener, mediation of sound practices increases the reach of the space arena, i.e., the space inhabited by listeners and performers (Smalley, 2007). In the case of sound and image live-streaming, for the purpose of exchanging sounds at a distance, as in the Intercultural Dialogue action, the space arena is discontinuously enlarged. In other words, the space arena is enlarged by mediatized performed space, which transmits its musical gestures and sounds. However, mediatized performed space is seen as space

amplified by means of technologies, loudspeakers, and even simultaneous Internet transmission, which favors the enlargement of the reach of a confined sound environment. The Intercultural Dialogue action indicates that the mediatized performed space also encompasses sound reception and practice, not necessarily to preserve the intimacy of gestural aspects, but to enlarge the space arena reach.

Not only did the Intercultural Dialogues action encompass spatial relationships of sound as regards sound technologies and interfaces, but it also promoted the ownership of physical space by means of Aquarpa and Parashurama music-making. The action took place at São Carlos and Lüneburg railway stations. Then, the railway station was a common point between both places notwithstanding their architectural and historical differences. São Carlos railway station is located in the city center and is used for transport of cargo. It also houses agencies and foundations linked to the city administration. The acoustic horizon of São Carlos Railway Station encompasses a multitude of sounds coming from street, rail, and local traffic. On the other hand, Lüneburg Hauptbahnhof was much quieter, especially due to the fact that the event took place on a winter Sunday. Lüneburg Hauptbahnhof is divided into three halls, with trains running near the platform. The event was held in the third, enclosed hall. In addition to differences in daily use of physical space, there were also differences between musical perspectives as well as bands' strategies for interpreting the space, as mentioned below, between the two musical bands: Aquarpa, in Brazil, and Parashurama, in Germany.

Aquarpa and Parashurama differ not only with respect to sound styles; they also differ as regards choice of instruments, rhythm, harmony, and musical construction. In addition to the challenges posed by live-streaming tools and technological devices, there was also the challenge of mediating these two different music-making styles towards a dialogue. Creating a musical dialogue by using digital media between two bands having different musical standpoints, however, reinforces the need for

bringing distinct realities together. In this case, the bands involved in dialogue were equally skilled in terms of musical language, but espoused different perspectives. Since bringing unlike actors together constitutes one of the aims of the Hybrid Territories Project, this action encouraged diverse musical expressions to interact and come together by digital media. In the Intercultural Dialogue context, there is a multitude of repertoires, and availability and openness to dialogue. Its purpose is to promote interaction with the dissimilar, between those who master the same language form, but display different styles and attitudes.

The musical research group Aquarpa consists of graduate students in Music Education at Federal University of São Carlos, coordinated by Professor Eduardo Néspoli. Aquarpa [2] displays influences from musique concrète, electroacoustic music, and sound art, using experimental acoustic and electronic instruments created by the group themselves. These instruments have their own characteristics; they are made with low cost materials and combine acoustic and electronic conditions of sound generation. That is, although its musicians could produce sound by using mechanical energy, other instru-

ments generated sound electronically according to stimuli of various natures.

On the other hand, Parashurama [3] is a rock band that employs traditional instruments – e.g., drums, guitar, vocals, bass and synthesizers. They have a history linked to occupation of deteriorated buildings and spaces in cities in an attempt to draw attention to the need for people participation in deciding on the uses of derelict spaces. Parashurama's main strategy is the use of sound amplification to occupy these spaces, i.e., in order to achieve their goal they make use of sound intensity and juxtaposition, filling up these spaces with sounds. As Lüneburg Hauptbahnhof was quiet and empty, their amplification of sounds resulted very pervasive, with little interference from outside sounds.

In order to make full musical use of the space of the São Carlos Railway Station, Aquarpa used musical objects existing at the station proper. Thus, not only did Aquarpa's musicians use their own musical instruments, but also made musical use of objects found at the station and traditionally deemed as non-musical. Hence, they explored sounds produced by railway objects, e.g., pins, nails, clamps, rails, clips, and fishplates. The appropriation of heavy



Figure 2
Parashurama playing during
the event. Lüneburg, Germany.

iron-made objects that produce their own sounds is consistent with the railway context and alludes to industrialization, from a Western point of view, thereby establishing a sound-image (Wishart, 1996). This sound-image is developed by taking ownership of values external to sound, i.e., association with non-sound values. The sound source is acknowledged in this compositional process, referring to the image of the object used as an instrument. This strategy seemed to entail the incorporation of objects, appropriation of everyday objects unused musically, and transformation of their acoustic sounds by digital media.

At both venues, Germany and Brazil, there was the need for local miking and amplification so that sounds produced at these places could be appreciated by both local and remote audiences. The sound arena was enlarged to encompass two geographically distinct locations by way of live-streaming and sound interfaces. That is to say that, though distinct and spatially separated at first, the two sound arenas came together by the use of sound amplification and transmission so as to create a communication channel made possible by live-streaming. Thus, the space of listening was expanded while allowing communication between musicians. Due to transmission and because the bands were supposed to conduct readings in those spaces and adapt them to their own musical languages, the theme of space became a narrative, told in multiple ways. While previously constrained by continuous space, source-bounded sounds were then transmitted in a discontinuous space. With the help of musicians and sound technicians, by either electronic or digital generation and modification, miking, panning, volume, among other settings, the amplified and transmitted sound became a virtual sound space. In other words, there occurred a musical reading of the space, which established virtual relationships and, in turn, gave rise to another virtual sound space, combining concrete and virtual sound spaces in a hybrid way.

By means of livestreaming, both acoustic sound spaces received interventions of foreign sounds, ex-

panding the space of listening in real-time. Dealing with separated sound-space and musical groups relationships it is clear that there is, on the one hand, appropriation of objects for the purpose of producing sounds and, on the other hand, association with space by means of occupation and juxtaposition. When these two readings of space are brought together remotely, other relationships are introduced, resulting not only in a local mediatized space (Smalley, 2007), but also in a remote mediatized space and its influence.

[EX]CHANGING SOUNDS: CHANGING SPACES

Sterne (2005) argues that social processes are embedded in processes carried out by sound interfaces. The relationship with enlarged space is similarly established in the field of human experience and is also a cultural and aesthetic practice (Manovich, 2006). From these standpoints, processes of live-stream-mediated performances do not only have implications in the context of computer and network technologies. There is also a juxtaposition of concrete and virtual instances leading to the development of an intrinsic relationship in which boundaries between these two instances are dissolved, thereby creating hybrid spatialities. By establishing hybrid spatialities, it is possible to create other channels of communication between two or more physical spaces by digital media, thereby changing relationships inscribed in them.

In the case of the Intercultural Dialogues action, distances are made shorter and sound readings are brought together. Both bands established a sound narrative about space, which was transmitted to a geographically distinct venue. This juxtaposition of readings, incorporation, and use of space merge when done simultaneously by digital media.

It is possible to list the following categories with respect to specifications of sound environments in the Intercultural Dialogue action:

Local sound environment: the acoustic horizon influenced by local sound and amplification interfaces, encompassing original sounds from the en-

vironment and sounds derived from the bands' performances, transformed also by the local musicians' acts and sound amplification.

Virtual sound space: sound space created by both bands and technicians, mediated by sound interfaces by way of sound capturing, mixing, and amplification.

Sound influenced by transmitted sound space: reconstruction of both local sound environments by transmitting sounds to each other's venues.

Therefore, the local sound environment encompasses sounds from its physical space combined with the band's performance sounds, amplified by local technicians. That is to say that both venues have their own specificities, which were transformed by the event proper.

Without taking live-streaming into consideration, the event per se implied sound intervention to both venues, which altered their ordinary sound natures, because the inclusion of bands or music groups in those venues was not usual at all. In this context, the Intercultural Dialogue practice constituted even a contrast between musical groups and space: Parashurama making use of higher sound intensity at a quiet venue and Aquarpa focusing on sound nuances and details alongside the din and hubbub of São Carlos Railway Station. This local sound intervention was also possible due to the amplified virtual sound space constructed by the bands with the help of sound technicians by processes of sound capture, reproduction, processing and amplification, thereby changing the acoustic horizons of the venues in question. In other words, virtual sound spaces were created by sound interfaces processes, as capturing, mixing, and amplification, manipulating sounds in a way that may be unrelated to its unmediated repercussion in concrete space, virtualizing these sounds.

In addition to local influences on the virtual sound space, these sounds were also transmitted via the Internet, which gave rise to geographically-discontinuous mediated sound spaces. Each venue is affected by the virtual sound space created thousands of kilometers away by mediation, thereby ex-

panding its own sound space. Not only were both railway stations affected by extraneous sounds created at a distinct venue, but they also received sound interpretations from each other.

This exchange of sound interpretations and influences provided hybridization of both venues: its concrete space, sound space, and virtual instances. In the Intercultural Dialogues context, sound interfaces and live-stream technologies enabled proximity between these two venues, which resulted in hybridization of these three categories. The result was not only a media-expanded acoustic horizon, but also the exchange of space interpretations that transform the local sound environments. The bands' local sound interventions, which interact with their local physical spaces in their own idiosyncratic ways, are transmitted to each other's contexts by digital media, thereby promoting the intersection of three sound environments and combining real and virtual instances. Furthermore, there was a channel between the two venues, changing their elements, with sound as a vector of this process.

RELOCATING THE EAR

The use of digital media boosts the creation of hybrid spatialities, which in turn promote other listening and communication modes and spatial settings. Sound may be considered a flexible, resettable, fleeting instance of space originated from the dynamicity embedded in its environment. The action of sound-related digital media is also inscribed in its virtual instances, i.e., sounds are no longer restricted to their environments and can thus promote indissoluble relationships between the concrete and the virtual. The inception of sound reproduction and, later, of sound transmission, transformation, and synthesizing promoted space-temporal changes in the sound environment. Sound mediation can overcome rigid relationships between original sources and listeners while bringing them together as well as apart.

Although the discussion about space and sound is present in the discipline of electroacoustic music and acousmatic listening, these reflections can be

extended to architecture, expanding its scope. Other practices may be added to this context, also giving rise to physical spaces as virtual sound spaces. For instance, media such as piezoelectric sensors may give voice to a physical structure, i.e., capture vibrations inherent to the venue structure by bringing their formerly-imperceptible action to a controlled and domesticated sonority.

The Intercultural Dialogues was also beneficial to the Hybrid Territories Project so it promoted reflections on sound-space relationships, indicating potential uses of sound interfaces in cultural actions and interventions in public spaces. The results from this action were also employed at CDHU Culture Festival in São Carlos on May 26, 2012, establishing remote sound communication between the rock band Malditas Ovelhas and the rap band SubLoco Coletividade. During this event, these two bands established a simultaneous process of collaborative music creation via the Internet and altered the notion of “live music” in cultural actions.

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