

**Networks of (tele)presence: tuning in to the environment through the INTIMAL App©**

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The migratory relational listening perspective connects people and environments, beyond identities, moving towards transcendental forms of embodied connection across the distance. This perspective might position Earth as a migrant itself in its accelerated transition with a climate breakdown. While we all meet in these transitions, the INTIMAL App© positions itself between a telematic embodied interface and an instrument that contributes to the creation of networks of (tele)presence as we “tune in” with the environment and become part of its resonance.

In this article, I present a series of artistic telematic sonic performances, facilitated through the INTIMAL App©, a hybrid mobile telematic sonic environment' that I have created.

Rooted on the experience of migration, the performances are staged as mobile hybrid listening rituals in sonic migrations: the resonances left in-between geographies and cultures when we migrate. The

rituals are mediated by the application, specifically with sound frequencies, activated by people's walking steps, implying the use of an 'embodied' telematic technology to connect with such resonances. I hereby reflect on how a relatively simple sonic interface and such frequencies, when used collectively, awake connections between humans and the more-than-human, and ask how a 'synthesized' sound helps us to tune with our surroundings, bringing us closer to the reality of the environment rather than detaching us from it.

***Breathing and walking: sensing place and sensing (tele)presence***

The INTIMAL App© is a telematic environment that invites people to simultaneously and collectively engage their sense of place and sense of presence across distant locations, experiencing relational listening. This is a negotiation between sensing place in a physical location, and, simultaneously, sensing presence and telepresence across distant locations. It is rooted in experiences of human migration and the 'estrangement' (Ahmed, 1999) which happens between native and host

lands, and which affects the embodied perception of time and space and the surrounding acoustic environment, as well as the perception of one's own voice. It derived from the INTIMAL physical/virtual 'embodied' system for relational listening in telematic performance, created between 2017-2019. The system was designed and informed first by researching Colombian migrant women's sonic experiences of their migrations to Europe using Pauline Oliveros' Deep Listening practice and Embodied Music Cognition methods, and an oral archive of other Colombian women in exile in an exercise of collective memory (Alarcón Díaz, 2019; Alarcón Díaz et al, 2019a). INTIMAL involved three software prototypes: MEMENTO to interact with oral archives using walking movement, RESPIRO for transmission and sonification of breathing data, and TRANSMISSION to mix and broadcast improvisers' voices from distant locations (Alarcón Díaz, 2019b).

In that project, walking was stated as the migratory movement that helps us to sense place and find directions, while breathing was chosen as the body micro-movement to state each human's body presence

and telepresence, its rhythms, emotional states, and vocal expressions. The system was tested in a telematic sonic improvisation between the women participating in the project, connecting from Oslo, Barcelona and London. Derived from this experience, I suggested that sonification of breathing patterns can create an emotional bridge between body movement and sound for telepresence (see Alarcón Díaz, 2022a), expanding the forms of embodiment within telematic performances.

I used Jensenius' taxonomy of body movement (Figure 1), to position sound expressions in relation to body movements (Alarcón Díaz and Jensenius, 2019). For further developments, my intention has been to interrelate these forms of body movement and vocal expression as breathing becomes a bridge for emotional telepresence.

### ***Tuning in: between an interface and an instrument***

Detached from screen and video interfaces, and from the staged sound performances with microphones and a controlled sound space with audiences, the INTIMAL App© was

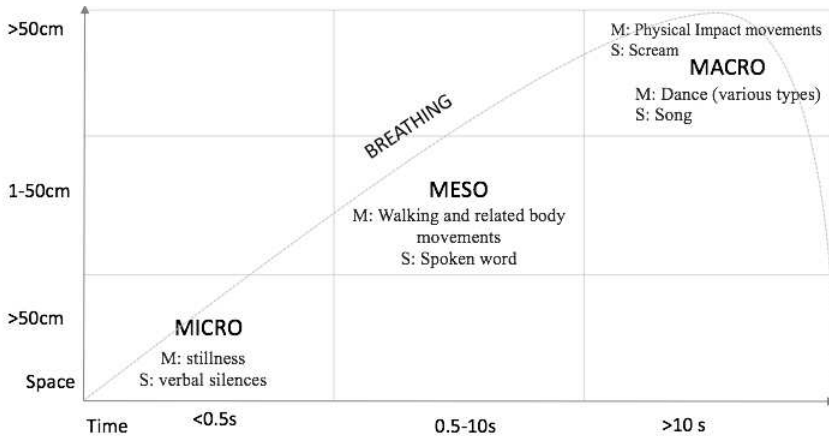


Figure 1: Analysis of INTIMAL performance, and breathing as emotional bridge using Jensenius' Taxonomy of Body Motion (Alarcón Díaz & Jensenius, 2019)

created in 2021 in the midst of the pandemic. The App became a synthesis of the prototypes of the INTIMAL system, combining walking and breathing as interdependent movements that bring together people's rhythms as they simultaneously explore their surroundings and connect across distant locations.

The INTIMAL App© tracks people's walking rhythms and converts these into sound resembling a breathing wave. When used collectively, people can hear through headphones each other's walking patterns and playback stories that have been left by other walkers/

improvisers, responding to listening 'prompts' or text scores. As a preparation for the journey, the App asks participants to 'Tune In' using sine wave frequencies ranging between 174Hz, 396Hz and 528Hz, and state their bearings by finding their North.

Thanks to the project Unlock<sup>1</sup>, the App was developed and tested first in its individual and collective mode with women in Bath (UK), listening to excerpts of migratory journeys of Colombian women from the INTIMAL project in order to trigger their own migratory journeys (Alarcón Díaz, 2022b). Since 2021, the INTIMAL App© has been tested in

eight other different spaces and contexts,<sup>2</sup> and I have composed mobile listening rituals for each occasion. These rituals set the paths and the intention for people to “tune in” with themselves, the earth, the environment and others across distant locations.

The sounds of the frequencies have become a fascination and a mystery. For instance, in the project *Unlock*, the frequencies helped women to listen to words of pre-recorded stories, connecting them with inner sounds, as well as with birds: “When the tone stopped, I felt more connected to the sounds around me (such as birdsong)”. The collective drone created across distant locations created a sense of togetherness: “It [The environment] felt fuller in a way, hearing their frequencies was like being in the company of others”. (Alarcón Díaz, 2022b)

In the Earth Festival 2022, I invited eight improvisers connected from São Paulo, New York, Vienna, London, Madrid, Sweden, and Boston, to listen to their surroundings following the score *Dreaming while awake: a network of Presence*.<sup>3</sup> The network they created brought con-

nections as they tuned in with the built and natural environment, in estrangement, recognition, acknowledgement, and reflection of what is changing in their environments, of what leaves traces, and the unnoticed; they connected emotionally as in search of a deep source of presence. One of the improvisers, the musician Cassia Bomfin connected from a car park and expressed poetically, within the piece, how her imagination through this connection *despertou um algo* (“something woke up”). Others’ improvisers’ voices described sensory experiences with the sun, the voices of children and the relationship with the trees and humans. The experience felt like an awakening of details of life that are not usually noticed as with rich value.

### **Synthesis**

As stated before, I used the mobile phone and its technological possibilities to make a *synthesis* of an artistic concept. With this, I arrived at the use of “waves” without harmonic spectrum. Individual and collective listening through the INTIMAL App© seemed to follow a subtraction experience within the

environment. From a practical technological perspective, the sine wave was chosen as the simplest form of sonifying walking steps in relation to a breathing rhythm. A minimal sound is produced in each phone, with the transmitted data across distant locations. But why use a synthesized sound to connect people with the outer environment? Could it perhaps become a contradiction, if I am using a sine wave to imitate a breathing wave, activated with my very human steps, unlike the previous more sophisticated sonifications imitating for instance wind?

From a cultural and historical perspective, Tara Rodgers explores in her writing "Synthesis" the origin of synthesized sounds, reminding us that synthetic sounds are parallel to the creation of synthetic materials in organic chemistry: " 'manmade' imitations of natural substances" (Rodgers, 2015, p. 213). At that time, this created a fascination and also a critical perspective on the novelty of such sounds. Rodgers also reminds us, how the analysis and synthesis of musical sound were understood by Harry Olson and colleagues at RCA Laboratories, in the 1950s, as "analogous to the process of decoding

and coding a signal in a communication channel" (Rodgers, 2015, p. 210), opening ideas "for a cybernetic era, where multiplicity of forms could be expressed as patterns of data" (idem, p.211). I suggest that in the INTIMAL App©, the sine wave might trigger our memory of a telephone tone and the expectancy of someone else might pick up the call. The wave brings a beginning and an end, creating a flow activated by people's walking rhythm. Stillness becomes individual silence but, if desired, the listening of others' signals is still active.

Beyond the oppositions and embrace of these sounds, Rodgers suggests that "synthesis, then, is not merely a means of creating novel sounds. It also directs us to a charged moment: that fleeting "interruption of time" (4) that follows a retrospective analysis and precedes a new synthesis. Through this opening, we may listen for the cultural histories and sonic epistemologies that reside within technological forms, and for logics of part-whole relations and complex systems that frame the contours of everyday soundscapes" (Rodgers, 2015, p. 217).

**INTIMAL App©**

I situate the INTIMAL App© in a middle ground between an interface and an instrument.

When described as a technological interface, it involves the embodied and movement transmission in-between people who are connecting across distances. This transmission, in turn, when sonified, creates a sonic interface with the sum of frequencies, rhythms, and interferences occurring simultaneously between the walkers. The walkers can record sounds which can be heard by others if they choose to activate these by their steps. Metaphorically the body becomes the interface that interacts with each environment, wandering in its own way, and receiving a tuning response according to their walking rhythm. Sonically, the experience becomes an improvisatory-sounding experience which requires full-body listening, generating musical and extra-musical experiences between people.

The App becomes an instrument when the walker focuses on the control of features such as choice of frequencies, tuning with the rotation of the body to the right or to the left tuning up or down the fre-

quencies. When being outdoors, the tuning becomes also a reference to listening to the surrounding environment.

The use of different equipment that states their technological interfaces, mobile phones, embedded microphones, headphones, and reliable internet connection, become part of the ritual within an environment. The role of the interface is to highlight a sonic event consisting of different vibrations that are involved in the connection, from the perspective of each distant listener in a difficult-to-control space. When people detach from control and focus on the tuning, the walking ritual extraordinary degrees of the perception emerge.

***Togetherness and becoming part of the resonance***

In 2023, the INTIMAL App© was used in a co-located telematic experience of *Tuning In with Silences* at Scenario 22 in the STRP Festival of Art and Technology in Eindhoven. Forty participants became part of the experience situated in an empty non-place at the back of the city's train station. The invitation was to

“Tune In” with silence, and when they wanted, they could “voice their silences”. They could choose spaces within the application to tune in, using metaphors in the walk: “stepping on ancient roots”, “gazing stars”, and “dreaming”.

A feedback from one of the participants at STRP Festival 2023 was as follows:

Getting “in tune” with others, while exploring a relatively inhospitable and public space, resulted in something quite unexpected.

Walk, listen, imagine. Everything was slowly changing as one intertwined with the other. The experience was decidedly focused (on the device, on the walk, on the listening) but at the same time sensory expansive: the sound of the wind, the sunlight, the sounds of the facilities around us; everything took on a very strong emotional component, almost psychedelic.

All this mixed with the awareness that we were not alone in that place, that there were others exploring the same space, trying to capture the same sensation of free discovery within the determined. What caught my attention the most about the INTIMAL app was how it managed to create a connection between people who had (almost) never seen each other before, who had never spoken

to each other (since we had been sharing a state of quite a bit of silence, before we started). In that strange space next to the train station, we all became erratic entities in search of others, but also in search of ourselves. Thanks to the technological medium (forgive the irony), we were able to share this unique experience and connect looking for harmony, syntax and synchronicity.”  
Zorro Fork (translation from original text in Spanish)

Within such a connection between humans, inner connections, and open and green environments, these sounds highlight a transcendental experience.

Early experiments with sound frequencies by the composer Pauline Oliveros were inspired by their mystery and the ability of these sounds to connect with inner sounds she was hearing. Elaine Radigue’s work with electronic sounds invites us to listen to the slow changes in-between them and listen to what these awaken on us (Eckart, 2020). In her piece *Environmental Dialogue* (1997), Pauline Oliveros invites us to listen either indoors or outdoors, first observing our own breathing. Becoming aware of the field of sounds in the environment, each



Tuning in with Silence. STRP Festival 2023, Eindhoven.  
Still image from video by Pablo Sanz.



person is invited to 'reinforce' the pitch or timbre of sounds that call our attention within the environment. She insists on the meaning of 'reinforcing,' which "means to merge rather than imitate". If we 'reinforce' we "might produce a resonance in the environment (...) [m]erging with sound or silence will produce a resonant state of awareness" (Oliveros 2013).

In my own experience with this simple and challenging exercise, when successful, we experience a subtraction of what we are listening within the environment, in order to become a part of it and stimulate a resonance in the environment.

The INTIMAL App©, positions us within the environment, inviting us to explore awareness through walking and producing a sine wave tone with our pace. I suggest that this movement awakes a sense of agency, which might help us to become part of the individual and collective possibilities that emerge in shared social, cultural and geographical environments, in connection to ourselves, other humans, and the more-than-human. A listening opportunity to become part of the Earth's resonance in its transition.

## Notes

[1] The project Unlock was funded by The Studio Recovery Fund 2021, Bath Spa University, and was developed in collaboration with Dr Liliana Rodriguez, Service Designer, and Kieran Harte, Computer Programmer.

[2] The INTIMAL App© has been experienced as an interface/instrument with others in the Intimal Collective, STRP Festival 2023 Scenario 22 (Eindhoven), Soundings: Assemblies of Listeners and Voices across the Souths (Berlin, August 2022), Museo de Arte Moderno de Medellín (July, 2022), Migration Matters Festival with the Intimal Collective (Sheffield, June 2022), GEXLAT with Intimal Collective (April 2022), Earth Day Telematic Festival (April 2022), Sensing: The Knowledge of Sensitive Media Research Group – The Brandenburg Centre for Media Studies (ZeM) (June, 2021), and originally developed and tested in Bath with the project UNLOCK, awarded by The Studio Recovery Fund, Bath Spa University 2021.

[3] Link to the piece: <https://soundcloud.com/networkedmigrations/dreaming-while-awake-a-network-of-presence-by-ximena-alarcon> (last access Nov 11, 2023).

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