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Ubiquitas Musicae: The Ubiquitous Potential Of Sound For Inclusion

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Abstract: The phenomenon of sound, encompassing its various components such as listening and speech, inherently possesses an omnipresent potential, manifested as an aesthetic and cultural consequence stemming from the continual proliferation of dissemination points. With the advent of new technologies, the metaverse, and artificial intelligence, the process of sound communication has evolved into an accessible, portable, continuous, and guided by a decentralized perspective on education and development. This facilitates the enhancement of sound's usability and accessibility, fostering an innovative approach to bringing individuals closer together and fostering value-sharing along an inclusive trajectory. The polyphony of sound, with its interplay of timbres and frequencies, constitutes a nuanced dialogue among the diverse facets of human diversity. Through vicarious listening, which encompasses multifaceted functionalities extending beyond mere aesthetics, the potential of sound to transcend barriers and traverse cultural, social, and physical boundaries becomes apparent, thereby reinforcing the value of the individual as an agent of change in interactions with others. This contribution seeks to reflect on the ubiquitous potential of sound as a medium to facilitate inclusive processes and foster self and mutual recognition.

Keywords: sound; ubiquity; inclusion; educational technologies, inclusive instructional design

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1. Introduction

The current social system, in which we find ourselves involved every day, is increasingly enriched by numerous sensory stimuli (Pink, 2011). There is a real *pervasiveness of the senses*, as often the number of stimuli proposed is greater than the possibility of being able to manage them. In such a scenario, sound takes on significant value. Bauman (2012) with his concept of *liquid modernity*, highlights how the fluidity of spatial and temporal relationships and contexts has a direct impact on our sensory experience, emphasizing the importance of understanding the new forms of social interaction that emerge in this context. Benasayag & Smith (2004), on the other hand, invite a critical reflection on how the contemporary socioeconomic system shapes and

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conditions our sensory perceptions, highlighting the crucial role of power and control dynamics in the configuration of the urban sensory landscape. Galimberti (2009), with his anthropological and philosophical approach, highlights the deep link between our sensory experiences and the symbolic and cultural representations that shape our way of perceiving and interpreting the world. Finally, Beck (2007) points out how ongoing socio-technological transformations, such as digitalization and hyperconnection, have significative implications on our sensory experience, introducing new forms of *fragmentation* and *simultaneity* that influence our perception of time and space. In this complex context, Giaccardi & Magatti (2012) offer an interesting analysis of how digital technologies are redefining the boundaries between the body and the environment, bringing to light new forms of *intersensoriality* and *hybridization* that challenge traditional categories of perception and experience. Through these interdisciplinary perspectives, it is possible to glimpse the multiple facets of sensory pervasiveness in contemporary society and to better understand how it influences and is influenced by the sociocultural, economic, and technological dynamics of our time. It is, therefore, possible to understand, from this brief review, how music is fully the protagonist, music not to be understood only as a harmony of notes, but in its declination of *listening* and *speaking*.

Sound is a complex phenomenon that manifests itself through mechanical waves that propagate in the air, water, or other material media. Its presence is ubiquitous: from nature to the sounds produced, from human activities and machines to spoken language, it is possible to show up how everything emits sounds that help shape our acoustic environment (Duba & Cornuelle, 2021). This wealth of sound stimuli not only provides crucial information about the world around us, but it can also elicit emotions (Cunningham et al., 2021), affect our mood (Gouk, 2020), and improve or impair our concentration (Vercammen, 2013).

In addition, with the advent of technologies, sound has taken on new forms of expression and diffusion (Nowak, 2022). From audio recordings to digital music, and podcasts to mobile notifications, sound has become an increasingly ubiquitous and versatile means of communication. This digitalization of sound has further expanded its impact on one's daily life, introducing new challenges and opportunities in the management and understanding of the contemporary soundscape (Hosseini et al., 2024). Think of the many means of communication now used not only to inform but to share experiences and parts of life. They present a plurality of communicative codes, intertwined to give greater prominence to the message to be conveyed. TikTok, Instagram, and Facebook are just a few examples of these media, which are progressively increasing and which, consequently, lead to an enlargement of the possible ways of communicating. Images associated with sounds, and videos that intertwine photos, GIFs, and reflections of life experiences, sometimes create the exact opposite, i.e. they distract from the message because they do not find a precise *semantic correspondence* and, therefore, are in many cases antithetical to what is meant to be said (Pedroni & Ciofalo, 2022). *Semantic dissonance*, therefore, is also a reproduction of a reality that makes the individual unable to trace his or her trajectories of meaning in the *multiplicity* and *profanity* of the experiential (Sibilio, 2020). This has led several students, belonging to various disciplinary areas, to deepen the theme. Think of the investigations of Murray Schafer (1993), who highlighted how sound is a fundamental constituent of the environment that surrounds us, capable of profoundly influencing our perception and experience of the world. Schafer introduced the concept of *soundscape* to describe

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the complex set of sounds that characterize a given environment and highlighted the importance of preserving the acoustic quality of places that are significant for human well-being. In addition, Cox (2016), known for his work in the field of architectural acoustics and acoustic ecology, explored how space design affects sound quality and highlighted the importance of considering acoustics as a key element in urban and architectural design, noting how there is often a poor setting of environments and underlining how it is often not possible to search for anchor points, and therefore be able to associate the sound with the actual meaning that you may intend to transfer.

At the same time, Steven Feld, anthropologist, and ethnomusicologist, has contributed significantly to the understanding of sound as a vehicle of cultural and social meaning in different communities around the world. Through the concept of *acoustic ecology*, Feld (1994) highlighted how sound is intrinsically linked to the construction of cultural identities and the transmission of traditional knowledge. It would seem, therefore, that sound is present in several places and at the same time, and allows continuous interpretations to be traced even in the same time frame. This type of connotation would make it possible to define sound as ubiquitous, i.e. to be both *hic and nunc* as well as *hic et post*.

The question that arises is, therefore: how can such ubiquity foster educational and, specifically, inclusive processes? Starting the reflection from this question, the present paper intends to trace a description of the ubiquitous potential of sound for inclusion, that is, sound that, despite the multiplicity of places in which it can appear at the same time, finds interesting anchor points in the educational and inclusive field. The first paragraph will focus on the definition of ubiquitous music, through the reflections of some authors who have reflected on the theme; In a second section, on the other hand, we will try to search for the coordinates of connection between the ubiquitous potential of sound and the processes of inclusion, focusing attention on how it is possible to promote a didactic that is *for everyone* through music and ubiquitous sound.

2. The Ubiquitous nature of sound

The idea of ubiquitous music is not new; "Ubiquitous music" is the expression used by Rusconi to indicate the aesthetic and cultural result of the constant multiplication of the points of diffusion and listening of music. Ubiquitous music is accessible, transportable, continuous, appropriate for integration with the environment, and decentralized listening. The logic of these characteristics is related to the technological, sociological, and experiential dimensions of the phenomenon in question (Rusconi in Eco, 2014, p. 75). However, although the theme has been focused on recently, it should be noted that over time several authors and thinkers have taken an interest in it.

Pythagoras, for example, reflecting on the harmony of the celestial spheres, meditate on the idea that music permeates every aspect of our lives. As suggested by Pythagoras music is understood as a *cosmic entity* capable of influencing not only our emotions and creativity but also the order and harmony of the world around us (Fubini, 2023). In contemporary society, music has become ubiquitous, spreading through a multiplicity of devices and platforms, from radio to online streaming, from shops to public spaces. This ubiquity of music has profound implications on one's personal sensory experience and one's perception of space, transforming one's inhabiting environments into *dynamic* and *constantly evolving sound contexts*. Ubiquitous music, therefore, invites us to

reflect on the *power* and *scope* of music in shaping our lives and connecting with the world around us, in line with the Pythagorean vision of a harmonious union between humanity and the universe through the universal language of music (De Siena, 2006). Over time, Comte (trans. 2013) has contributed significantly to the understanding of music as a fundamental element in the construction of social cohesion and civil order. His theory of the *law of the three stages* provided a conceptual framework for understanding the development of human thought, highlighting the central role of the arts, including music, in the transition from the theological to the scientific stage. According to Comte, music is a powerful means of expression and social cohesion, capable of conveying shared values, stimulating a sense of belonging, and promoting harmony within the community. In this, music is not just an individual experience, but a *social phenomenon* that reflects and shapes the cultural and political dynamics of society. Comte's approach encourages us to consider music not only as an autonomous art but also as a social and political force capable of influencing the construction and evolution of social structures and civil order. From a phenomenological point of view, however, it is interesting to analyze Husserl's interpretation. Sound is understood by the thinker as *temporal consciousness* (Clarke, 2011). Husserl urges us to explore music not only as an external object but as a lived experience, imbued with meaning and intentionality. According to Husserl, music represents a direct expression of human consciousness and emotions, and as such, plays a central role in the construction of one's experiential world. Its notion of phenomenological reduction fosters us to break free from preconceived attitudes and approach music with an open mind, becoming able to explore the richness and complexity of its sensory and emotional qualities. Through this phenomenological perspective, music stands out as a lush ground for investigating the nature of human perception and consciousness, offering valuable insights for understanding the deepest dimensions of one's aesthetic and spiritual experience.

In addition, Cage, with his philosophy of *music of indeterminacy* and *silence*, radically reconsiders the very concept of music and sound perception (Popoff, 2011). For Cage, sound is not just a matter of notes or harmonies, but a *manifestation of life itself*, which emerges from the random and unpredictable interaction of the sound elements that surround us. His search for new ways of listening and exploring sound has opened up new horizons in music composition, pushing artists to break free from convention and embrace the diversity and complexity of the sound world. Through his work, Cage taught us to grasp beauty in apparent chaos and to celebrate the richness of our everyday acoustic experience. In this way, his vision of music as an *open* and *inclusive* experience fits significantly into the discourse on the pervasiveness and diversity of sound in the contemporary context. Cage also offers value to silence as an expression of *inner sound* (Bolis, 2012). Educating to dialogue and above all *educating to silence* as a *precursor of dialogue* implies the activation of further processes such as *reflection*, as well as *memory*, a treasure trove of static dynamism, as it preserves moments of life experienced, uses "*the memory of an experience to be used in present action or to predict future consequences* (Berthoz, 2011, p. 15). Thus, silence becomes a proponent of reflective processes, it pushes us to *dialogue with memory*, which in it becomes "*a vocal agenda that is present and that creates an internal dialogue, a voice with which our conscience speaks to us*" (Sibilio, 2020, p. 81).

Heidegger (1998), on the other hand, points out that sound represents a way of understanding the world, which contributes to *being in the world*. With his philosophical

reflection on being and temporality, he offers a radical contribution to the understanding of music as an *existential* and *ontological* phenomenon. Through the concept of *authentic listening*, Heidegger highlights how one can immerse oneself in the world of sound without prejudices or predefined interpretations, but rather to welcome sound as a direct manifestation of being in its becoming. For Heidegger, music is not simply an external object or a set of sounds, but a privileged way to get in touch with the very essence of human existence. His notion of *openness to being* induces us to explore sound not only as a physical phenomenon but also to experience the depth and complexity of inner life. In this way, his conception of music as a form of *revelation* or *source of truth* fits significantly into the discourse on the generality of sound, offering a philosophical perspective rooted in our most intimate and authentic experience of the world of sound.

Finally, Attali (1995) speaks of *sound economy*, i.e. sound as capable of *influencing* and as *influenced* by social dynamics, an indicator of social spending. Attali, in his work "Noise: Political Economy of Music", offers a provocative analysis of the relationship between music and power, emphasizing the central role of music in the construction and transformation of social and political structures. According to Attali, music is not only a reflection of society but an anticipation of future transformations, a laboratory for exploring new forms of organization and resistance. His notion of *noise* as a destabilizing element explores latent tensions and conflicts in society through sound dynamics. In this context, the pervasiveness of sound becomes a generative arena for the expression and negotiation of identities and ideologies, an arena where the different voices and narratives of our time clash and intertwine. Through Attali's work, it is possible to see how music is not just an aesthetic pleasure or a sensory experience, but a powerful weapon for social and political transformation, capable of influencing and inspiring radical changes in the world around us.

Sound, according to this description, is therefore understood in a double sense: on the one hand, it can represent a form of *confirmation of being in the world*; this implies the presence of a *sound stasis*, that is, a sound that allows one to concretize one's being-there, given by interacting dialogues, the result of a precise socio-cultural and environmental influence that shows how being-a person is the result of precise legacies that shape it and allow it to maintain fixed points in one's own culture and/or training; On the other hand, sound can also be configured as a manifestation of the *becoming of the world*, going even beyond it. Melodies that embody cultures and that interact presuppose that there is a sharing of values, of stories that intertwine harmoniously and allow one to draw the relevant aspects of the other and vice versa. In this sense, a real *semantic ecstasy* is achieved (Riviera, 2020), where the "ἐ ξ-στάσις" necessarily leads to moving away from rigid and predetermined interpretative perimeters, opening up to diversity, to the possibility of improving one's construction of meaning, in favor of new constructions, deriving precisely from the interaction with the other than oneself, from the union that takes place employing passages, melodies that are shared and personify other dimensions, both spatially and temporally *co*-evolving, as well as the systems in which they have been and as well as the systems through which they can spread (Maturana & Varela, 1984).

In this sense, ubiquitous does not only become the semantic potential of a song or a melody, but the medium through which the latter can spread. Over time, several of

these mediators have followed one another, such as Transistors, Car Radios, Portable Stereos, and Walkmans, which have allowed real compression of sound into digital formats, followed by cutting-edge tools such as the Internet, up to Artificial Intelligence (AI) and, in recent years, the Metaverse. Thanks to AI, for example, music creation has become accessible to a wide audience, allowing anyone to compose, produce, and edit songs with ease (Jin et al., 2022). Advanced music generation algorithms use neural networks to learn from vast existing music datasets, creating innovative compositions in different styles or even mimicking the style of specific artists. In addition, AI is fundamental in improving the user experience through music streaming services that offer personalized recommendations based on individual tastes and analysis of listeners' preferences (Lee et al., 2021). This everywhere potential also extends to professional music production, where AI-powered tools can assist musicians in mixing, mastering, and even analyzing market trends. In addition, AI-generated music can be integrated into multimedia applications, games, and virtual settings, enriching the user experience, and opening up new creative possibilities in a wide range of industries. As far as the Metaverse is concerned, today a new frontier is given by the Music Metaverse (MM). In the context of MM, musical ubiquity reaches new heights, radically transforming the experience of listeners and artists themselves (Turchet, 2023). In this three-dimensional virtual space, music becomes a fundamental component and permeates every interaction, offering immersive multisensory experiences. Artists can perform virtual concerts in real time, reaching a global audience without physical boundaries, while users can explore interactive virtual environments populated by immersive musical performances (Wang, 2022). Thanks to virtual and augmented reality technologies, listeners can experience concerts and events in completely new ways, totally immersing themselves in the music and interacting with artists and other participants as if they were physically present. At the same time, MM provides a platform for artists to experiment with innovative art forms, combining visual, sound, and interactive elements to create more immersive experiences. The ubiquity of sound in the metaverse, therefore, opens the door to new modes of creative expression, collaboration, and social connection, transforming perception and sound experience (Chen et al., 2023).

From this point of view, a new meaning of ubiquitous sound would seem to emerge, in which two specific dimensions given by space and time fall. If we want to draw a first connection between sound ubiquity and the dimension of *space,* it is possible to say that ubiquitous music is first and foremost music everywhere, music that pervades *public* and *private spaces* (Stramaglia, 2022); between the two, however, it is above all the former that we are referring to, in particular to the proliferation of music in contexts not specifically intended for listening (e.g. shops, shopping malls, restaurants, offices, waiting rooms, gyms, beaches, means of transport). To define the music that can be listened to in this kind of place, emphasizing its inescapable character, much literature uses the term *unchosen music* (Barenboim, 2004), precisely to highlight the massive musical stimulation in every place even where the will of the individual is lacking. Music and sound are segments that in some way always presuppose a choice, precisely because producing sound implies an action, which by its very definition is an *activity of purpose* (Sibilio, 2023) and which, in this perspective, presupposes that those who generate it already have a clear idea of why they do so and the final goal. The

presence of music, even in the absence of a voluntary conductor, implies, therefore, that the person is immersed in the sound even against his will and that the sound itself becomes predominant in his enjoyment, even in the absenteeism of a precise personal coordinate. In any case, it is interesting to note how, even without a will, sound can influence the individual, and proof of this is the fact that musical pieces, even without having directly chosen them, remain in the memory even after having listened to them fleetingly in the office or at the supermarket, shaping one's thought and inducing one to *recognize oneself in them* (Ahlbom et al., 2023). Its presence, it should be clarified, is in any case the result of decisions, made by those who can manage the contents of physical and media spaces, as in the case of music used in advertising, television, and video games. The same influence also occurs when the melody is replaced by language that is expressed in speeches, and narratives (McAuley et al., 2021). The human being is, by nature, *oriented towards listening*, even where his desire is not to internalize the message heard. Listening does not imply simple feeling, which remains the anchor of a purely sensory dimension; listening presumes a correlation, the possibility of entering the thoughts of others without losing sight of one's own identity, one's essence (Sclavi, 2023).

Sound is ubiquitous even in the dimension of *time*. Music, by its very nature, is time. The succession of notes, rhythms, and harmonic structures creates a transient flow that contributes to the experiential quality of the sound (Cassidy & MacDonald, 2010). Musical temporality can affect emotions and perception, creating an experience that unfolds over time. Think of language and how it configures sound in its dimension of rhythm; therefore, musical compositions can modulate their sense of time, speeding it up or slowing it down (Smith, 2002). Ambient music and certain forms of classical music, for example, can allow the listener to be immersed in a dilated temporal experience, while more rhythmic types can create a sense of acceleration (Piana, 2013). The temporal dimension, however, is not limited only to the purely technical dimension. Time implies that, in the flow, interpretative redefinitions can be found, that the passing of the days induces us to attribute new meanings to what we may have heard previously (Harshav, 1993). Temporal changes, which are also interconnected with cultural variations, bring with them as a direct consequence the semantic alteration of a piece as well as the change in terms of meaning in the *modus comunicandi*, in the way of dialoguing with the other than oneself. Cultural changes and influences are central aspects to keep in mind when analyzing the meaning contained in a specific melody, a reflection of these changes and influences themselves. Working *in* time and *through* time, therefore, is a prerogative so that you always have a clear idea of what you are saying, precisely redefining the content as well as the *medium* through which to transfer meanings, in constant change (Evans, 2013).

Technology has also amplified the *temporal ubiquity* of music. The recording, diffusion, and enjoyment of music through digital devices have made music accessible in an all-encompassing way and in a very fast way. Modern communication systems have made it possible to be in contact, at the same time, with several people despite the distance, expanding the possibility of spreading, sharing, and building dialogic horizons in which to redefine, as well, as the meaning of what has been heard and said (Dillon, 2003).

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Always recalling the theme of the metaverse and posing this great opportunity not only in spatial terms but in temporal terms, it is useful to say that there are currently various types of metaverses, such as those based on games (e.g. Fortnite, Roblox, Second Life or Minecraft) and those based on blockchain (e.g. Decentraland or The Sandbox) (Lin et al., 2022). All these metaverses have a common thread: they provide a virtual space for real-time interactions with the digital environment and with other users in the form of avatars. These digital spaces let people come together, make friends, dance, and listen to live or recorded music. In the metaverse, a wide range of musical activities can be carried out, ranging from composing and performing to creating recreational music, from teaching to experiencing live virtual concerts, making music itself vicarious (Berthoz, 2015; Sibilio, 2017). Thus, ubiquitous music adapts flexibly to social as well as individual needs, harmonizes flexibly with cultural changes, respecting diversity and operating through it. It presents, one could say, traces of inclusion useful for understanding how to operate in a ubiquitous sense with and for music through a useful path to carry out activities for all, respecting everyone, according to a work trajectory that wants to be defined as inclusive.

3. *Ubiquitas musicae* and inclusion

Inclusive musical ubiquity represents a cutting-edge concept in the panorama of contemporary music enjoyment. Essentially, it's an approach that aims to make music accessible to everyone, regardless of age, cultural background, or physical or cognitive abilities. This idea embraces a wide range of practices and technologies aimed at breaking the barriers that have traditionally limited access to music, allowing a wider and more diverse audience to actively participate in creating, enjoying, and sharing meaningful musical experiences. However, ubiquitous music in an inclusive sense does not only imply allowing the person access to and free enjoyment of *musical heritage*. If music can also be declined in the dimension of sound and sound also implies a close link to language and, consequently, to communication, it seems necessary to note how ubiquitous music, ubiquitous sound, must possess the characteristic of sharing, *identity construction* (Wang et al., 2023), *co*-evolution (Asano, 2022), key aspects of inclusive teaching. Take as an example communication, understanding when to give the floor by listening to the other from oneself as well as oneself, with a view to openness and *mutual listening*; This implies that sound becomes an instrument of recognition, of openness to the other even in the peculiarity of the Self; this is already enough to redefine musical value in a strictly inclusive sense (Savage et al., 2021). It can be said that, in an inclusive function, sound takes on a progressive *hermeneutical* and *phenomenological* demodulation.

In the *hermeneutics of sound* (Ziemer, 2021) each tone, rhythm, and melody constitute an underlying language, a code that manifests itself in various forms.

The *polyphony of sound*, in its interweaving of timbres and frequencies, is configured as a subtle dialogue with the facets of human diversity. In attentive listening, the potential of sound to overcome barriers, to cross-cultural, social, and physical boundaries emerges (Canevaro & Mendolicchio, 2017). Therefore, sound returns new meanings, often implied, that can help to understand the internal dynamics of the other than oneself that sometimes remain analyzed only in a superficial way (Baroni, 1997). In distinguishing the verbal from the non-verbal the external dimension of speech is discerned, therefore a reception of information that can be ascribed to the mere

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sensory experience and that does not take into account the depth of the person who emits a message, the inner semantic aspect that has guided him and all the possible revisions that can take place in it based on personal experiences and experiences; on the other hand, what is not directly a word or cannot be expressed through it allows us to grasp those elements that are less logical in communicative, expressions of inner creativity as well as the expression of one's thought based on external influences that in some way affect the message itself and, perhaps, allow the reading of its original and *crystalline meaning* (Argyle, 1972).

It is useful, therefore, to consider sound as an interpreter that translates the surrounding environment into a universe rich in meaning accessible to all. It is a call to awareness of the variety of auditory experiences, recognizing that each of us has our way of interpreting and connecting with sound, with the sound produced by the other by ourselves. In the context of the real environment, sound becomes a means of *navigation* and *orientation* (Swaab et al., 2012). Its warning, guidance, and feedback annotations prove essential for those facing sensory or motor challenges. In this sense, sound becomes a theme that opens invisible doors, transforming everyday experience into a more accessible path. Inclusion is precisely accessibility and the ability to read what is said but above all what is not said by the other, it implies the possibility of being able to understand precisely through the *unsaid* and through *everything* that cannot be expressed with the word (Cottini, 2017), while at the same time reflecting on the contribution that can be made on a personal level to allow progress in terms of free expression of the self, ability to *self-determine* (Aiello et al., 2017) and *self-orient* (Aiello et al., 2023). Therefore, working with and through the area is configured as an inclusive modus *comunicandi* and *operandi* for the definition of new possible worlds (Aiello, 2017) not necessarily interconnected to the spoken sphere.

In the virtual realm, in addition, the hermeneutic of sound is amplified by challenging visual conventions and opening new avenues of communication. Sound design becomes an act of interpretation, a way of telling stories, providing spatial directions, and creating inclusive worlds beyond physical barriers.

From the *phenomenological* point of view, on the other hand, the sound experience is revealed as an intricate dance between the auditor and the sound itself (Smith, 1967). Every tone, vibration, and harmony become essential parts of an ever-changing sonic reality. In this perspective, sound can be explored as an inclusive phenomenon, a medium that connects the dimensions of human experience in subtle and powerful ways.

The phenomenology of sound invites us to immerse ourselves in the richness of auditory experiences and to explore how sound manifests itself in our subjective world. In the act of listening, for example, layers of meaning emerge that go beyond mere sensory perception (Wargo, 2020). Sound becomes a bridge that connects one's individual experiences, transforming time and space into a shared sonic canvas. From an inclusive perspective, the phenomenology of sound pushes us to consider sound not only as an isolated event but as something that merges with one's consciousness, creating a deep integration between the individual and the surrounding world. It is a call to pay attention to the richness of personal auditory experiences, recognizing sound as a phenomenon that can unite, involve, and transform the way we perceive and interact with our surroundings (Thorgersen, 2010). In this way, sound becomes a *catalyst* for an inclusive experience, a symphony that embraces diversity and celebrates human connection.

In the classroom, such inclusive sound sharing is possible through activities in which to organize times to *communicate* and times to *be silent* (Fiorentino, 2003). Collaborative activities, recognition of the other than oneself, forums, guided discussions, and interactive activities founded using virtual mediators or robots (Schiavo et al., 2024) are some examples with which to set up the work in an inclusive way, allowing participants to take part in debates in which the sound dimension is interconnected with the reflective one (Chiappetta Cajola & Rizzo, 2016). It is also useful, as mentioned, to promote the dimension of silence, transposing it not so much as "*be silent*", but rather as "*take silence with you*" The activities must all be useful to learn how dialogue means placing oneself in the condition of the other, understanding the other while maintaining one's own space for action, therefore exercising *empathy* (Harris & Van Drie, 2015; Beatini et al., 2024).
Collaborating through structured activities teaches everyone to act intentionally in respect of the actions of others by autonomously directing their formation in collective formation (Duncan, 1990).
The ability to act intentionally, to influence or direct one's behavior, and to have an impact on the surrounding environment is possible thanks to musical creativity activities: learners compose, perform, and interpret musical works, expressing their vision and intention through musical language, or instrumental performance activities they can enhance motor control, required for the management of the instrument (Hallam, 2010). The ability to perform reveals the power of the learner to interact with his or her environment, with the systems that characterize it. In addition, improvisational freedom allows for instantaneous decision-making regarding melody, harmony, and rhythm; Sound activities are also useful to enhance emotional communication, through the choice of notes, dynamics, and communicative timbres, with which learners operate as agents of communication, transmitting *emotional meanings* through the musical medium and sharing them with those who are different from themselves with a view to mutual growth and co-construction (Delfrati, 2008). It can be said, therefore, that the individual finds himself living in a new and inclusive agency, in which learners become pioneering and revolutionary artists of new musical styles, in particular with the potential offered by digitization and music production, thanks to which it is possible to constantly modify and disseminate musical works. This makes it possible to "*create an authentically inclusive school in which teaching can relate to learning in a 'complex adaptive system' aimed at guaranteeing equal rights and the right to difference in a more general logic of social justice*" (Sibilio & Aiello, 2018, p. 3).

4. Conclusions

Based on the overview presented in the previous paragraphs, it is useful to make some concluding remarks. It can be said that sound presents itself as a universal language, revealing itself as a ubiquitous language, understandable by all, and able to overcome linguistic and cultural barriers (Letts, 1997).

Sound can also be seen as a medium for inclusion, since in all its possible forms it can act as a stimulator of inclusive processes, both in physical spaces and in digital universes, helping to create accessible environments tailored to everyone (Lubet, 2009).

Using sound can be an important way to create *empathic environments* in the real environment: sound acts as an empathic guide, improving navigation and allowing more active and safe participation, thus allowing us to go beyond mere sensory discrimi-

nation, linked to the recognition of the other than oneself through the acoustic components that are implicit in diversity, such as the peculiarity of the voice, timbre, frequency, and incoming at a form of immediate individuation and cultural, historical, social recognition, which shape diversity and allow us to accept singularity, according to paths that can be defined as inclusive (Bruni, 2008).

Proposing sound design in inclusive educational design is therefore a possible way to achieve this goal, favored by an interdisciplinary approach that can use sound as a fundamental element to maximize inclusive potential and accessibility (Liu, 2024).

Considering sound design also implies giving the right space to the virtual dimension, through environments in which sound allows for experiences that go beyond the barriers of visual perception and offer inclusivity, even in the digital world (Loveridge, 2020).

Recognizing and applying the inclusive potential of sound, in conclusion, is a call to action to create environments where diversity is celebrated, and accessibility is considered a priority.

Promoting moments of deep listening, listening more deeply, recognizing sound diversity, and celebrating sound as a means of connecting meaningfully with the surrounding world, with the *other,* and with the *differences from oneself*, are therefore suggestions for setting up activities and work sessions in an inclusive key, favoring the effective emergence of the ubiquitous potential of sound *for* everyone, *of* every one of us, according to an approach that can be defined as inclusive.

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