



Article

Auditory Resonance: A Transdisciplinary Concept?

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Abstract: Focusing on the influential work of the German sociologist Hartmut Rosa, as well as on selected positions in sound studies, this essay explores some aspects of auditory resonance, an over-determined concept exemplified by music that no single conceptual framework can exhaustively explain. For this reason, transdisciplinary research is especially productive in exploring the wide range of auditory resonance if it does not adhere to a seemingly all-inclusive theoretical self-definition but starts from an actual, singular experience. This subjective, even personal response to auditory resonance opens up various intersecting, supplementary, and often competing paradigms of critical analysis that interrogate any hegemonic claims to perspectives and insights potentially implied in single-disciplinary methodologies.

Keywords: transdisciplinarity; auditory resonance; personal experience; sound studies; Hartmut Rosa

1. Introduction: Auditory Resonance as Personal Experience

Let me begin with an account evoking auditory resonance as primarily, or at least initially, an event of personal and subjective experience. A few weeks ago, while vacationing in New York City, I attended a concert at Carnegie Hall by the Chinese pianist Lang Lang (12 October 2021). This being my first visit to the city since the outbreak of the COVID-19 pandemic, I was rather nervous about the trip: Would it be safe to take an airplane, move about in a crowded urban environment, and spend several hours in Carnegie Hall's main auditorium, which was sold out to capacity? However, after the slow-moving but strangely re-assuring process of getting our vaccination records and tickets checked, my worries subsided as Lang Lang launched his recital. After a performance of Robert Schumann's pleasant Arabeske in C-Major, op. 18, he played J. S. Bach's Goldberg Variations, BWV 988. The composition, extremely demanding on the performer and the audience alike, consists of a beautiful Sarabande-like aria followed by 30 variations, which explore an astonishingly virtuosic and intellectually probing range of polyphonic writing, including canons, an overture in the French style, even a Quodlibet with ironic citations of folksongs, and ending with a recapitulation of the aria. It is one of those compositions, such as Bach's Art of the Fugue, or Beethoven's Diabelli Variations, that seem to exhaust—in the double sense of fully exploring and terminating—the sheer possibilities of its genre.

From the first notes, I found myself—as presumably did many of the other listeners—absolutely captivated by Lang Lang's daringly imaginative, if unconventional, interpretation, marked by sudden changes between extremely slow and breathtakingly fast tempi, a sometimes nuanced, sometimes exaggerated way of accentuating inner voices, an often shock-like switch of dynamics, and an overall intensity of affects that drew me in instantaneously and irresistibly. Yes, one might call his playing showy, even self-indulgent, but it was this risk-taking, this jarring gap between highly intellectual insights and the projection of some crowd-pleasing effects, that kept my attention. Although the artist received an enthusiastic ovation, not everybody in the audience that evening, however, seemed to have enjoyed the performance; I heard later that several people left before the end.

The exhilarating experience was heightened by the fact that I was immersed in this live performance *after* having listened repeatedly to Lang Lang's recording of the same piece, which had just been released a few months before. Therefore, my mind was, albeit



Citation: Goebel, Rolf J.. 2022. Auditory Resonance: A Transdisciplinary Concept? *Humanities* 11: 6. https://doi.org/ 10.3390/h11010006

Received: 8 November 2021 Accepted: 24 December 2021 Published: 27 December 2021

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Humanities 2022, 11, 6 2 of 7

semi-consciously, vacillating between the immediately sensuous presence of Lang Lang's actual performance unfolding in front of me, and whatever lingering traces of memory I had retained from hearing his CD version, as well as landmark recordings by Helmut Walcha, Glenn Gould, and others.

2. A Preliminary Definition of Auditory Experience

I have told this story to illustrate what I like to call auditory resonance, a concept that has come to the fore in recent musicology and cultural studies. Briefly and tentatively defined, I think of auditory resonance as an attunement—either carefully planned and anticipated or suddenly, spontaneous, and unexpected—between a sonic event and the individual listener's (or collective audience's) imagination. Auditory resonance proceeds from an initial sense of being captivated by an immediate, sensuously affective presence of sound only to lead, sooner or later, to the listening subjects' self-reflective analysis of what they believe to have heard. As Veit Erlmann (2014) has argued in his wide-ranging historical account of listening practices under the auspices of the modern intersection of rationality and sensuous resonance, hearing is not merely a metaphoric construct but relies "on the bodily substance of our capacity for sensory experience" (Erlmann 2014, p. 17). However, while he rightly emphasizes the corporeal, indeed physiological materiality of listening, Erlmann problematically tends to "foreground the ear's rich physicality, independent of the signs and meanings that the organ may mediate" (Erlmann 2014, p. 17, my emphasis). By contrast, I argue that auditory resonance is fundamental to multiple practices of listening precisely because it does not separate acoustic materiality and the cultural significations of hearing as they unfold in contingent contexts of history, society, politics, aesthetics and myriad other areas of life. While their neurophysiological processing rarely rises fully to the individual's cognitive awareness, acoustic sensations only attain meaning if they are recognized as culturally embedded experiences—signs, sense, and the sensory are interrelated parts of sensibility.²

In our age of global interconnectivity, this sense of immediacy is essentially an aftereffect of our conscious or subliminal submersion in state-of-the-art (or nostalgically rediscovered historic) media technologies of sonic reproduction and transmission, from live-streaming off the internet back to the vinyl record player and, if still available, the oldfashioned gramophone.³ Importantly, auditory resonance can never be taken for granted; what goes on sonically may captivate some but not others, or it may hold the attention temporarily but not continuously, thus confirming the spontaneity and unpredictability that are typical of the concept. Like other sonic events and their subjective experiences, auditory resonance requires various strategies of verbal representation to attain hermeneutic interpretability, intersubjective communication, and narrative fixity. Thus, auditory resonance, again like many other experiences in the world of sound, is neither merely a culturally constructed metaphor nor is it reducible to the material facticity of bodily processes or acoustic physicality. Rather, as a phenomenon situating the human subject's bodily presence, imagination, and affects in the world, it is decidedly over-determined in the sense that the listening subject can never fully attain a complete understanding of the sonic event and no single conceptual framework can exhaustively explain its inherently excessive structure. For this reason, auditory resonance, as an inherently polyvalent aspect of human experience, is a likely subject for a transdisciplinary network of scholarly analysis questioning any hegemonic claims that a single-disciplinary approach may raise as to the presumed meaning of the object of its investigation.

3. Approaching Transdisciplinarity

However, what does this mean? Or what could it mean? To answer such questions, one might now delve deeply into the huge body of theoretical work on transdisciplinarity, tracing how it is different from, say, interdisciplinarity, multidisciplinarity, comparative studies, etc. Not only would this have to be highly selective and arbitrary, going way beyond the scope of this brief essay, but it would also distract from the approach that I am

Humanities 2022, 11, 6 3 of 7

taking here, which suggests that our attempts to understand auditory events ought to start, phenomenologically, as it were, from an actual, singular experience that then necessitates, enables, and unfolds within various intersecting and often competing paradigms of critical analysis. So, what might transdisciplinarity mean in this context? The Latin prefix trans-, the dictionary reminds us, indicates "across", "beyond", "through", "so or such as to change or transfer" (Merriam-Webster n.d.). By this account, "transdisciplinary" may suggest a project of individual scholars or collaborative teams, traversing—transversing—across the boundaries between established fields of inquiry, presumably leaving their established self-understanding intact; or the term may mean a going beyond these subject specialties, thus, leaving them behind, discarding their authority, or reconfiguring their legacy into an entirely new whole; or, finally, "transdisciplinary" might indicate a move of cutting through fields of knowledge, penetrating their territory, possibly grabbing what is deemed valuable for one's own purposes, and perhaps even violating their integrity in the process. In its programmatic allegiance to discursive change, the term "transdisciplinary" is itself multiply coded and over-determined. Thus, transdisciplinarity may denote an "integrative process of knowledge production and dissemination", reacting against "narrow discipline focus and hyper-specialisation", and entailing a "transgession beyond old methods" as well as a "cross-fertilisation of experiences and skills as a road to a convergence of expertise" (Du Plessis et al. 2001, p. 18). Or transdisciplinarity may seek to go beyond the interdisciplinary effort of the "mixing of different disciplines which nevertheless keep their own shape" to explore a methodological hybridity or even a boundary-dissolving meta-discourse in which "the different elements can no longer be distinguished" (Somerville and Rapport 2020, p. xiv). In any case, the trans- prefix indicates a transformative energy that directly affects ever-changing productions of knowledge in various historical periods and cultural contexts, in the process continually or abruptly reconstituting the very objects of inquiry themselves.

Although auditory resonance is, foremost and primarily, a highly individual attunement of a listening subject immersed in a singular sound event, this particularity is necessarily embedded in a wider network of what Axel Volmar and Jens Schröter have called auditory media cultures, by which they mean "historically and locally specific practices in networks of persons, signs, and technologies" (Volmar and Schröter 2013, p. 10, my trans.). My experience of Lang Lang's performance is thus not merely an imaginary dialogue between a pianist and an isolated listener; rather, it involves a host of other people—the audience as a collective body of subjects, the concert organizers, the artist's agents, financial sponsors, the piano tuner, ushers, etc. The event's multiply coded effect of acoustic sensuality and intellectual meaning depends on a symbolic chain of signs—the musical score (if it is know to the listener), the sounds emanating from the piano, Lang Lang's aura as a spectacular, highly unconventional celebrity, advertisements for the concert, the announcement of one of the most prestigious concert halls' reopening after the pandemic, which had occurred just a few days before this concert—and various sound-recording technologies, in this case the CD of the Goldberg Variations and my stereo set that preconditioned my attitude toward the live performance.4

Ideally, then, a transdisciplinary investigation of an auditory resonance experience such as I had witnessed might combine a musicological analysis of the score; a positioning of the pianist's interpretation that evening in current debates around historically informed performance practices vs. deliberately iconoclastic, "modernizing" actualizations; a critique of fashionable, extravagant stardom, commercialization, and marketing strategies in the world of classical music; a stylistic comparison between Lang Lang's CD recording and his live performance; an attempt to link possible neurophysiological and psychological process to the affective experience of the music; an analysis of how the acoustic properties of Carnegie Hall's large Stern-Perelman auditorium affect the pianist's playing and its reception; speculations on how the building's historic aura as an architectural landmark barely escaping demolition in the late 1950s may co-determine aesthetic experiences; and, last but not least, the direct influence of the COVID-19 pandemic—medically, socio-politically,

Humanities 2022, 11, 6 4 of 7

and psychologically—on the venue's temporary closure and reopening in October 2021, together with other public performances in New York City and elsewhere. I am merely sketching these approaches here to suggest that over-determined experiences like auditory resonance pose considerable challenges to the range of personal interests and professional expertise among scholars, which is, of course, the primary reason for the tendency toward collective team-work among proponents of transdisciplinarity.

One of the most representative collections of essays in this field, The Sound Studies Reader (Sterne 2012), edited by Jonathan Sterne, provides some fundamental suggestions how such a research agenda for sonic events might be implemented. Stressing that the historically and culturally ever-changing worlds of sound correspond to changing conceptual frameworks for beholding them, Sterne defines sound studies as a field of interdisciplinary inquiry in the human sciences "analyzing both sonic practices and the discourses and institutions that describe them"; it "reaches across registers, moments and spaces, and it thinks across disciplines and traditions", beginning with sonic phenomena like "speech, hearing, sound technologies, architecture, art, or music"; touching on governmental institutions, religion, forms of nationalism, and entire cities; engaging the "history of philosophy, literature or ideas"; and critiquing "relations of power, property or intersubjectivity" (Sterne 2012, p. 2). Without differentiating it from such interdisciplinary orientation, Sterne mentions a "broad transdisciplinary curiosity and an awareness of partiality" in the sense of a self-reflexive knowledge that the key terms employed by sound studies "belong to multiple traditions, and are under debate", even while sound studies "names a set of shared intellectual aspirations", rather than a "discrete set of objects, methods or the space between them" (Sterne 2012, p. 4). Thus, Sterne's collection questions overly specialized, traditional fields not through a deliberate erasure of disciplinary boundaries, but by advocating a selfreflexive meta-inquiry into the intersections, commonalities, and differences among distinct areas of inquiry. These respond to specific sonic phenomena in their particular historical and cultural contexts, transmitted by their multiple media-technological representations, and displaying different modes of significance for the world today.

4. Hartmut Rosa and Resonance as the Fundamental Concept of World Relations

Transdisciplinarity, however, does not have to be pursued collectively; in fact, Sterne's volume does not reflect an actual team of collaborators but assembles individual (excerpts of) articles selected according to the editor's individual views on what he considered representative of the field of the time. Moreover, a transdisciplinary scope can also be envisioned by single scholars, whether or not they explicitly identify their enterprise by that label. This is decidedly the case with Hartmut Rosa's Resonance: A Sociology of Our Relationship to the World (German original, 2016; English translation, 2019). This being a foundational text in current resonance studies, my own remarks are significantly indebted to his argument. Like my own account, Rosa starts his wide-ranging exploration by narrating (fictional) case studies, thus suggesting that any historical and theoretical account of resonance has to begin in the real or imagined life-world of people or, as he puts it, by using the concept of resonance as having an "enormous potential for analyzing how human beings relate to the world in nearly every area of life" (Rosa [2016] 2019, p. 164). Nonetheless, Rosa is aware that even the most diverse and inclusive account of critical principles must be anchored in one specific academic discipline. Thus, he writes that it is not sufficient to employ the term "resonance" in a merely metaphoric sense "if we wish to conceptually and systematically establish resonance as a fundamental concept of social philosophy and a social-scientific analytical category on which to build a comprehensive sociology of human relationships to the world" (Rosa [2016] 2019, p. 164).

Despite this broadly inclusive scope, Rosa wishes to "develop a social-scientific category from the physical phenomenon of resonance" (Rosa [2016] 2019, p. 165). Thus, he traces the concept back to its being "first and foremost an acoustic phenomenon" since it is derived etymologically from the Latin term for "to resound." Rosa's primary example refers to two tuning forks: "If you strike one tuning fork in close proximity to another, the

Humanities 2022, 11, 6 5 of 7

second will vibrate at its own frequency", but not through a linear, mechanical connectivity but through an attunement in a shared space of co-presence where "the vibration of one body stimulates the other to produce its own frequency" (Rosa [2016] 2019, p. 165, emphasis in the original). Deriving from this acoustic scenario, resonance in the social sphere "describes a mode of being-in-the-world", where "two entities in relation, in a vibratory medium (or resonant space), mutually affect each other in such a way that they can be understood as responding to each other, at the same time each speaking with its own voice" (Rosa [2016] 2019, pp. 166–67, emphases in the original). Rosa emphasizes that the desire for resonant relationships between mutually responsive, if often irritating, voices is always countered by the "possibility that this response will fail to materialize, that this voice will not resound": "In fact, our attempt to gain, accumulate, maximize, or optimize access to and control over a resonant experience may even be the very thing that destroys it" (Rosa [2016] 2019, p. 172). With this definition in mind, Rosa reminds us that a "proper critique of relations of resonance, however, requires a crucial final step in order to move beyond momentary experiences and be able to analyze habituated and institutionalized human relationships to the world as a whole along with their resonant qualities." In this sense Rosa analyzes, among many other subjects, "resonance-facilitating and resonanceinhibiting aspects of institutions, practices, and modes of socialization constitutive of (late) modern society", addressing "spheres of work and family, along with those of art, religion, and nature" under the "pressures of acceleration and competition" that "serve or block resonance" (Rosa [2016] 2019, p. 171).

Thus, as even a selective glance at the volume's index shows, Rosa covers aesthetics, Critical Theory, cognitive science, economics, education, Habermas's theory of communicative action, Marx's philosophy, neurobiology, medicine, the environmental crisis, politics, psychology, and many other subjects. Whether or not these disciplines really come together to form a unified and consistent whole to explain the complexity and spectrum of resonant relationships is, I believe, less important than the fact that there is no necessary contradiction between a single scholar's individual starting-point in one particular discipline (the social-scientific approach, in Rosa's case) and a self-conscious sliding from this specific paradigm to potentially unlimited opportunities for various stages of intersecting supplementarity, mutual illumination, and even critique among analytical approaches originally coming from diverse, perhaps seemingly irreconcilable assumptions, methodologies, and interests. Whether we identify this movement as "interdisciplinary", or multidisciplinary", or "transdisciplinary" would attest more to a desire for labeling and theoretical categorization than to a fundamental and programmatic acknowledgment of the openness, the dynamic trajectory, of cultural inquiry.

5. Musical Resonance as a Paradigm for Transdisciplinarity

If this kind of thinking always starts from one single-disciplinary paradigm, it does so by foregrounding one particular object of study, which is then expanded to affect the conceptualization of others. It is in this sense that music assumes a central place in Rosa's investigation of resonance. What I felt when listening to Lang Lang, of course, only replicates the common experience during performances of resonant relationships that emerge "when a *spark* is felt between the artists themselves as well as between the artists and their audience, producing a collective resonance event" during which concertand theatergoers experience a moment of transformation "when they themselves in a way spontaneously become part of the aesthetic event" (Rosa [2016] 2019, p. 290, emphasis in the original). However, beyond such experiential effects, music for Rosa takes on an essential quality akin to Romantic metaphysics, which elevated (instrumental) music, being non-verbal and non-representational as regards actual things in the real world, to a direct articulation of a longing for the infinite, the redemptive, or the absolute. For Rosa, in music "our relationship to the world as a whole becomes tangible and thus can be both modulated and modified. Music in a way negotiates the quality of relation *itself*, whereas languages

Humanities 2022, 11, 6 6 of 7

and sign systems can only ever thematize one particular relationship to or segment of the world at a time" (Rosa [2016] 2019, p. 94, emphasis in the original).

Because music, whether classical or popular, for Rosa displays a universal power to forge authentic experiences of resonance in virtually unlimited areas of life, this art, beyond its aesthetic origins, possesses a particularly wide-ranging potential for transdisciplinary explorations. Even associating music with politics, Rosa defines modern democracy as being fundamentally based on the idea that it "gives every individual a voice and allows that voice to be heard, such that the politically shaped world thus becomes an expression of this productive polyphony" (Rosa [2016] 2019, p. 217, emphasis in the original). For Rosa, this quasi-musical understanding of democracy restores bodily, affective, and sensual aspects of political life undervalued in concepts like Jürgen Habermas's or Bernd Ladwig's theories of politics as a public process of "rational argument and the critical examination of interests and positions" (Rosa [2016] 2019, p. 217). If Rosa's theory sounds overly idealistic, disregarding, for instance, real obstacles to political polyphony raised by economic disadvantage, racism, and gender inequality, he does acknowledge that, for instance, German National Socialism crossed the line from authentic resonance, which acknowledges pluralism and difference, to an "identitarian concept of resonance-as-echo" in a merely passive sense of forcing submission to a manipulative politics of mass spectacles in a process amounting to a "pathology of resonance" (Rosa [2016] 2019, pp. 219–20, emphasis in the original). However, Rosa also draws attention to the many ways in which, during the decades after 1968 rock music displayed a transformative power of resonance in political and civic movements, even though authoritarian rulers feared and persecuted this music's emancipatory agency. At the same time, Rosa acknowledges that at least in Western societies, the faith in pop and rock music's "transformative force for revolutionizing our collective relationship to the world is largely dead", with its avant-garde energy yielding to nostalgic retro waves (Rosa [2016] 2019, pp. 221–22).

6. A Tentative Conclusions

Certainly, music, as a wide-ranging practice of composing, performances, and audience reception, is not a privileged phenomenon separated from, or even possessing any value intrinsically superior to, other sound-producing activities and listening experiences: the spoken voice, the sounds of nature and the animal world, the noise of machinery and industrial work, the silence of the unheard, forgotten, or marginalized, or the inexhaustible possibilities of imaginary soundings. However, in many ways, music, as an art encompassing sensuous immediacy, bodily affective presence, and analytical understanding, does exemplify and clarify many aspects of listening that other experiences of other sounds may not reveal that distinctly. What my brief note has stressed is that instances of musical resonance, like all resonance effects, are inherently transgressive. They start from somewhere, from a particular sound source in a given historical and cultural context and from a particular subject position and agency—aesthetics, politics, race/ethnicity, gender/sexuality, and so forth. For this reason, resonance effects may initially call for a particular disciplinary paradigm used to make preliminary sense of these origins. However, emerging from these beginnings, sound, primarily a temporally unfolding event, begins to travel across boundaries of history and geocultural space, affecting ever-new and ever-different audiences in unpredictable, contingent, often spontaneous ways that are always pluralistic and controversial. Tracing these translations, permutations, and reconfigurations might be particular promising and rewarding task of transdisciplinary resonance research.⁵

Funding: This research received no external funding.

Conflicts of Interest: The author declares no conflict of interest.

Humanities 2022, 11, 6 7 of 7

Notes

See Steiner (2018) for a survey of the literary history of listening. For a wide-ranging discussion of the concept of resonance in contemporary video and performance arts, see Koepnick (2021).

- In fairness to Erlmann, I acknowledge that his study amply documents exactly such interrelations between the material and the cultural in historical contexts ranging from the Enlightenment to modernity.
- Global interconnectivity in sonic phenomena, of course, predate the modernity of media-technological listening. See Classen (2021) on the cultural history of music as a transcultural and universally human phenomenon, particularly in a medieval context.
- For the analysis of auditory media practices Volmar and Schröter assemble, among others, articles referring to media studies, anthropology, semiotics, sociology, musicology, sound studies, psychoanalysis, and bioacoustics, while mentioning "praxis theories" such as ethnology, actor-network theory, and science and technology studies (Volmar and Schröter 2013, p. 17).
- In Goebel (2021) an example has been given of such traveling of resonance effects from German Romanticism through our global present, focusing especially on the conversations between the conductor Seiji Ozawa and the novelist Haruki Murakami.

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