Convivial instruments | Resonant tools

George Rahi

Approaching play in the context of music can take many pathways. While musicians are said to "play" their instruments, the creative choices that move beyond a fixed score are usually described as improvisation. These choices unfold within stylistic conventions shaped by genre, history, and context—and even "free" improvisation now carries its own traditions. These conventions form the field in which musicians play, a field structured by the instruments themselves. As Roger Moseley notes, "play fluctuates between the preordained and the unforeseeable," producing not only music, but also "a set of cognitive, technological, and social resources for playing in and with the world through the medium of sound."[1] Building on this expanded notion of play, this essay explores the ways in which musical instruments can also be seen as sites of ludic activity and as material mediators through which sound, culture, and imagination intersect.

As the material mediators of music, instruments are tools rich in functions and associations. Deirdre Loughridge and Thomas Patteson, curators of the *Museum of Imaginary Musical Instruments*, remind us that instruments are not inert containers waiting for expression but "constellations of forms, at once material and intellectual, which constitute the very conditions of possibility for all we understand by that little word, 'music'."[2] Instruments shape what is playable, imaginable, and audible. They encode histories of gesture, touch, and mediation; they are archives of cultural experimentation. As transducers, they convert energy into sound; as quasi-prosthetics, they extend human bodies into the world through waves and vibration.

To play them, and to build them, is to participate in centuries of ludic invention: a mass of related yet distinct practices which push and pull in multiple aesthetic directions. Each intervention—such as alternative 'isomorphic' keyboard interfaces, the touchless response of the theremin, or the circuit-bending controls of synthesizers—marks a playful intervention where old and new forms re-contextualize one another. From a media-archaeological perspective, instruments are living archives of play, indexing how cultures have reshaped relations between bodies and sounds across centuries. Despite the recent forces of standardization that make instruments appear settled and at the historical zenith of their designs, they remain dynamic objects, modified by cultural change, deliberate misuse, and imaginative reworking.

an organology of tools

In analyzing instruments to find commonalities and create taxonomies, the field of organology sought to classify the radical multiplicity of things we call 'instruments' through their different mechanisms and mode of sound production. Exploring the more

philosophical questions that arise when comparing instruments, Emily Dolan and John Tresch describe their *critical-organological* approach. Rather than limit themselves to making comparisons using technical description, they point attention to the "material configurations, social and institutional locations, degrees of freedom, and teleologies" of instruments as well as their "shared material practices, aesthetic commitments, and attitudes toward technology."[3] Instruments, in other words, condense within their design and use both individual and collective orientations toward technology, and negotiations with their associated constraints and capacities.

This critical lens resonates with Ivan Illich's concept of "tools for conviviality". For Illich, convivial tools empower creativity, remain adaptable, and foster horizontal social relations.[4] They stand in contrast to industrial tools that impose rigidity, dependency, and monopolization. Examples of convivial tools include bicycles, hand tools, and public institutions such as libraries. Writing in the 1970s, in a new age of car-choked cities, extractive globalization, and computers that promised to save labour but often created more busywork, Illich was attentive to the paradoxical effects of technology. While he did not discuss musical instruments explicitly, many would fit into his notion of conviviality as tools that remain accessible, flexible, and communitarian in their orientation. Perhaps one way to adapt some of Illich's criteria to instruments would be to imagine a spectrum of conviviality applied to the infrastructures of music-making. How do different instrumental cultures invite us to play differently? And how could different modes of creating and distributing music be compared according to such a spectrum?

On the side of distribution and reception, today's streaming platforms highlight the paradoxical situation: while promising effortless access, they consolidate into monopolized, extractive systems that continue to undermine musicians' livelihoods and communities. Here, music-making becomes entangled in exploitative digital economies, where efficiency is coupled with dispossession. The small revival of cassette and vinyl cultures represents an attempt to counteract this dynamic by re-materializing music's form and creating more tactile, community-based economies. A similar contrast can be seen in the cultures of instrument-making. Consider the difference between a factory-built piano, standardized to equal temperament and designed for industrial reproducibility, and a hand-crafted gamelan ensemble, tuned idiosyncratically to local traditions. Gamelan refers to the gong-chime orchestras and the encompassing performing arts traditions from Indonesia. Unlike the piano, the gamelan embodies adaptability and conviviality: its instruments are shaped through dialogue between makers and musicians; customized in tuning, range, and material, resulting in a multiplicity of soundworlds that reflect their local conditions. Artists such as Aloysius Suwardi, Dewa Alit, and Made Subandi—interested in expanding the expressive vocabulary of gamelan—were able to devise compelling new instruments through this reciprocal process with instrument builders, all while maintaining continuity with prior playing techniques and the sociality of the ensemble context.

George Rahi playing gamelan. Photo: Yohei Shimomae

post-digital instruments

Every instrument embodies a set of possibilities and constraints, shaping gestures, attention, and imagination. In this way, play and instrumentality are intertwined. Play is not just what happens with instruments but also what actively shapes the conditions for what happens to them: in the imaginative reworking of their very materiality. In experimental musical practices, new instruments become a site of play and critical reflection, challenging normative assumptions about traditional practices and notions of virtuosity itself. From DIY instruments to modular synthesizers, the wave of new approaches to instrument building reflects what Rasmus Fleischer calls a *post-digital* sensibility: a cultural moment when the novelty of digital technology has faded and artists and listeners turn again toward material, embodied, and analog dimensions of music performance and reception. Against the "waning of affect" produced by the endless availability of recorded media, post-digital practices value the situational unfolding of sound—its contingency, presence, and risk.[5]

thing power

In the context of western music, antecedents to the current era of playful instrument making can be seen throughout the 20th century's proliferation of percussion music, where the categorical distinctions between instruments and objects are most porous. Composers writing for percussion ensembles in the early twentieth century such as John Cage and Lou Harrison, lacking a tradition or historical repertoire, turned to found objects such as brake drums, anvils, and other junkyard scraps. They were inspired by global influences, particularly gamelan in its sororities of resonant metals. Here, play with objects became a way of unsettling conventions around western orchestral instrumentation to expand its sonic imagination.

Harry Partch extended this practice further. Dissatisfied with the tuning systems of Western music, he built a family of microtonal instruments, some constructed from military waste or industrial scrap such as the casings of spent artillery shells and glass bowls from nearby research facilities. Partch's playful recontextualization—turning waste into instruments—was part of his effort to overcome structural limits to musical expression and the inherited constraints of the Western tonal system. His percussion instruments relate to Jane Bennett's concept of "thing-power": the vibrational potential of matter to shift states, "to go from trash/inanimate/resting to treasure/animate/alert" through relational encounter.[6]

the re-organized organ

A watershed moment in my own practice of experimental instrument making came in 2017, when I facilitated *The Re-Organized Organ* project at VIVO Media Arts Centre in Vancouver. Over four months, ten artists transformed discarded electronic organs and other e-waste into new instruments. Constraint became a generative condition where circuits, wires, and speakers were dismantled and recombined into unfamiliar assemblages.

Inside the organ, we uncovered a palimpsest of electronic media histories—promises of sacred sound in domestic spaces, efforts at miniaturization, and shifting technological imaginaries. Each session we asked: What affordances emerge when we dismantle and

reassemble? How do these deconstructed materials invite us to play differently? What sonic possibilities lie dormant in devices cast aside as archaic? Through techniques of defamiliarization and deconstruction, each session became an improvisation not only with sound but with tools themselves. Instruments emerged as provisional, open-ended assemblages: a collaborative drum machine linking the keyboard to layered, glitchy rhythms, or a suspended circuit that turned the performer's body into a living conduit for sound. These were less finished products than invitations to play differently, extending play to the infrastructural dimensions of music.

instruments as worlds of play

Experimental instrument making invites us to rethink a wider spectrum of relations to tools. Instruments embody and invite play—not only in the moment of performance but in their relations to materials, histories, and futures. They remind us that music is a practice of world-building, one in which tools can either constrain or liberate.

By foregrounding play within instrument making itself, we open conversations about convivial potentials: to reclaim tools from standardization, to cultivate shared creativity, and to open possibilities for collective imagination. Instruments, in this view, are not just devices for producing sound but convivial tools—extensions of human creativity, archives of cultural experimentation, and agents in the ongoing improvisation of our worlds.

Notes

1. "About," Museum of Imaginary Musical Instruments (2013).
2. Jane Bennet, *Vibrant Matter : A Political Ecology of Things* (2010).
3. Georgina Born, ed., *Music, Sound and Space: Transformations of Public and Private Experience*. Cambridge University Press (2013).
4. Rasmus Fleischer, "Towards a Postdigital Sensibility: How to Get Moved by Too Much Music," *Culture Unbound: Journal of Current Cultural Research*, vol. 7, no. 2 (2015), pp. 255–269.
5. Ivan Illich, *Tools for Conviviality* (1973).
6. Roger Moseley, *Keys to Play: Music as a Ludic Medium from Apollo to Nintendo* (2016).
7. John Tresch and Emily I. Dolan, "Toward a New Organology: Instruments of Music and Science," *Osiris* (Bruges), vol. 28, no. 1 (2013), p. 278–98.

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