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Organology and the Others: A Response

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Is organology in crisis, isolated, largely irrelevant, and overdue for renovation? Are organologists, who commonly inhabit instrument collections and museums, clinging to outdated methodologies, their aims out of touch with current scholarly trends? We might imagine so, judging from a recent spate of proposals by younger academics in musicology, ethnomusicology, and material culture studies, to reinvent so-called traditional organology according to perspectives touted as "new," "critical," "lived," and the like. This "conscious and declared effort to break with traditional approaches" has been called a "spectre . . . haunting studies on musical instruments."¹⁴¹

An initial kerfuffle surrounded Emily I. Dolan's "Critical Organology" session at the November 2013 meeting of the American Musicological Society.¹⁴² Since then, efforts have been made to reconcile organologists with scholars in related fields and to align our interests cooperatively. Notably, at the June 2017 joint meeting in Edinburgh of the Galpin Society and the American Musical Instrument Society, Gabriele Rossi Rognoni convened a panel session entitled, "Organology and the Others: Cross-Disciplinary Methods Applied to the Study of Musical Instruments," at which the five papers printed here were discussed by their authors.¹⁴³ Time did not allow for questions or responses, so no guidance emerged then toward marrying disparate views. Still, a subtle sign of rapprochement could already be seen in Rossi Rognoni's shift

141. Gabriele Rossi Rognoni, "Defining 'Old' vs. 'New' Organologies: Changing Perspectives in Studies on Musical Instruments," presented at the "Music and Material Culture" conference, University of Cambridge, 7 December 2016 (https://musicandmaterialculture.wordpress.com/).

142. See Jessica L. Wood's response, "Perspectives on Critical Organology," Newsletter of the American Musical Instrument Society 43/1 (spring 2014): 14-16.

143. By "others" Rossi Rognoni means "all the scholars who are increasingly dealing with musical instruments, but who do not identify with organology[;] or, less personally, the other disciplines (e.g. material culture studies, science and technology studies) that are looking at musical instruments with different methods and research questions, although sometimes being unaware of the organologists' ones" (email to me, 1 February 2018). in emphasis from old *vs.* new organologies (see note 121), where "vs." implies opposition, to "Organology *and* the Others," signaling a positive relationship.

My thoughts here are offered to invite dialogue on some issues raised by the panel. What is the proper domain of organology? Is it a singular, well-defined discipline or just a catch-all term for any scholarly activity relating, however peripherally, to musical instruments? Can organology thrive despite limited employment and funding prospects? How can organologists communicate better with workers in sister disciplines and with the general public?

Working "From Inside Out"

Organology has always welcomed fresh, productive approaches. Over many years, insights and methodologies from ethnology and anthropology, musicology and ethnomusicology, music performance, natural history, material science and engineering, acoustics, physiology, music cognition, art history and aesthetics, philology, and many other directions have added to the knowledge base upon which modern organology rests. Many outstanding organologists have come to the field with experience in other areas. Victor-Charles Mahillon, one of the founders of the discipline, first worked in his family's instrument factory. Curt Sachs was schooled in art history. Laurence E. R. Picken was a zoologist; John Henry van der Meer studied law; Jeremy Montagu began as an orchestral musician and conductor; Patrizio Barbieri is an electronics engineer and acoustician; Arnold Myers and Grant O'Brien have backgrounds in physics, and O'Brien is a successful harpsichord maker.

Beside love of music, such scholars share an engagement with musical instruments in the first place as tangible objects requiring description, classification, analysis, authentication—essential bedrocks (not defining limits) of pragmatic organology. Only then, building on this factual foundation and following their particular interests, do organologists situate these sound-producing implements within the wider world, past and present. In other words, they work from inside out, starting from intimate acquaintance with instruments, then moving outward to relate them to music-making, technology, aesthetics, and culture and society at large. Curt Sachs's seminal publications reveal the broad humanistic scope of organology already in his day, and underscore the crucial role of museums in supporting this object-based but wide-ranging endeavor.¹⁴⁴ Without such extension, organology can seem sterile to scholars whose main interests lie elsewhere. Still, to paraphrase a remark by John Koster, much remains to be learned with tape measures.

An opposite, outside-in approach often begins with a theory of social interaction or an observation of some mental or cultural phenomenon, which is then explicated by reference to musical instruments. This "outsider" approach may not demand deep practical knowledge of instruments, since these are not the primary target of investigation. For example, an art historian, in considering a depicted trumpet from an iconographic angle, need not know how trumpets are made or played, or even if the image is realistic; the historian's question is, what does the picture mean? Or a folklorist making a point about phenomenology may refer to the experience of playing a banjo without coming to grips with the instrument's history, construction, sound, or functions.¹⁴⁵ As Emily Dolan notes, music analysis need not consider instruments (including the voice) at all, though organology can offer valuable clues to compositional decisions, for example in matters of orchestration, choice of key, and range.

Dolan observed that: "Musical works and instruments have long been understood to wield special powers" (note 41). Is that understanding literal or figurative? Leaving aside credence in supernatural actions, would it not be more accurate to say again that instruments exert power not autonomously but only in so far as we react to them? For instance, a ritual drum may be sacred, taboo, and fearsome to those who believe in its efficacy, but the same drum in a shop window may strike passers-by as only decorative. Or we may say an instrument is powerful as a metaphor for its loudness, brilliance, or other acoustic quality; but only the player wields that force; otherwise it lies latent.

Organology shares with ethnomusicology and social sciences the vital task of uncovering and explaining the powers, or meanings, imputed to instruments. Their materials, forms, decorations, sounds, and sensation of playing, for example, may have significance (often extra-musical, reflecting status, gender, taste, or tradition) that lies at the core of human-

^{144.} Curt Sachs, *Geist und Werden der Musikinstrumente* (Berlin: Reimer, 1929) and "La signification, la tache et la technique museographique des collections d'instruments de musique," *Mouseion* 27–28 (1934): 153–84.

^{145.} Thomas A. Adler, "Musical Instruments, Tools, and the Experience of Control," in Simon J. Bronner, ed., *American Material Culture and Folklife: A Prologue and Dialogue* (Ann Arbor: UMI Research Press, 1985): 102–18.

instrument relationships. Many choices of orchestration can be fully explained only with reference to instruments' contemporary meanings, apprehended by musicians and listeners alike (e.g., horns' association with hunting). These meanings, which might sometimes be interpreted as messages from the instruments' makers, of course may be powerful, and fluid, and may evaporate, but they are not intrinsic to the instruments; for that matter, neither is music itself.¹⁴⁶

Actor-Network Theory (ANT), an outside-inward approach, may help construct stories about relations between instruments and people, but I agree with Eliot Bates that ANT is not really a theory; rather, to me it is a story about telling stories. ANT's analytical or explanatory value for organology remains to be demonstrated, since it says little about instruments themselves beyond asserting they are actors possessing agency of some sort.¹⁴⁷ It is difficult to test the truthiness of such a proposition because, like the notion that instruments participate actively in social life, it is basically a thought experiment, not a verifiable statement of fact.

Bates, following Sean Murray (see note 150), distinguishes agency from intentionality, defining agency as "a property of things that make a difference/change in a particular situation" (p. 45). This observation provides no particular insight to musical instruments, because as a rule they make no difference to anything unless they are perceived, used, invested with meaning, or otherwise encountered by people.¹⁴⁸ By positing analytical equivalency between humans and objects, ANT "shifts accountability away from the actions of conscious agents onto inanimate materialities, the latter of which cannot in the end be held accountable, because they are not sentient. The trope thus weakens the usefulness of

146. We can let pass the argument that music is intrinsic to a barrel organ, player piano roll, CD, or other storage/playback device or system. Classic studies of instruments' significance include Robert Hans van Gulik's *The Lore of the Chinese Late: an Essay in the Ideology of the* Ch'in (Tokyo: Sophia University, 1940, 2nd, rev. ed. 1969) and Arthur Loesser's *Men, Women and Pianos: a Social History* (New York: Simon and Schuster, 1954).

147. I am reminded of a story about Jascha Heifetz: Being told after a concert, "Your violin sounds wonderful," Heifetz held the violin to his ear and replied, "I don't hear anything."

148. A superb study of the significance people attach to sound-producing artifacts is the historian Alain Corbin's Village Bells: the Culture of the Senses in the Nineteenth-Century French Countryside, transl. Martin Thom (New York: Columbia University Press, 1998). Corbin's straightforward exposition of bells' meanings and functions needs no esoteric theoretical underpinning, but perfectly exemplifies the "history from below" approach invoked by Flora Dennis (see below). important concepts such as action and agency, which we need in order to identify the precise origins and workings of historical events and practices."¹⁴⁹

Bates's observation that makers and repairers conceptualize instruments differently from players or listeners (though makers and repairers are also often players, and all are listeners), and that altering or replacing parts of instruments somehow changes the instruments' identities, is less problematic, indeed unremarkable. Likewise, the "messiness" of instrument invention and adoption is old news; Bates's casual assertion that the piano achieved "a stable form" (p. 48) sometime in the nineteenth century begs the question: Which particular form does he have in mind, and in what sense is it stable?

Aspects of Materiality

Since almost any thing can be made to sound in a musical context (however "musical" is defined), it follows that materiality is a fundamental concern of organology. This concern is shown by organologists' longstanding collaborative research with scientists, instrument makers, and musicians into the physical and acoustical properties of, among other things, violin wood and varnish, bell and organ pipe alloys, vibrating strings and membranes, even resonant rock. Clearly, these properties affect how instruments are made, used, and perceived. Museums show this, for example, by contrasting aerophones made of ivory, silver, or human bone with counterparts made of mundane materials. Organologists working in museums are ideally placed to explain how factors such as rarity, craftsmanship, complexity, beauty, and sustainability affect people's perception of instruments in consequential ways. Witness the recent fast-changing attitudes toward use of ivory and other materials from endangered species in instrument making. (I include beauty with materiality because perception of beauty arises from substantive, measurable qualities: form, color, texture, etc.)

Urgent questions surrounding the use of ivory and its substitutes important to players, makers, merchants, buyers, historians, legislators, and elephants—show how organology's concern with materiality overlaps with ecomusicology, environmental conservation, museology, his-

^{149.} Mike Cheng-Yu Lee, "Musical Intentionality: Between Objects and Meaning" (PhD dissertation, Cornell University, 2016): 5-6.

tory of technology, and social sciences.¹⁵⁰ It is exciting to observe the budding realization within these latter fields, including the science and technology studies (STS) invoked by Emily Dolan, as well as among (ethno)musicologists seeking new topics, of the heuristic possibilities of instrument research. This potential has been exploited by nineteenth-century acousticians and physicists including Ernst Chladni and Hermann von Helmholtz, and earlier by Athanasius Kircher, Leonardo da Vinci, and Pythagoras. Sociologists and historians of technology have some catching-up to do; Ruth Cowan's social history of American technology, for example, completely overlooks musical instrument manufacture despite its economic importance and record of innovation.¹⁵¹

Broad generalizations about musical instruments coming from STS and material culture studies, as reflected in the Edinburgh papers, call out for refinement. It can be argued that technology's impact on design and development of mechanized instruments (e.g., keyboards, valved brasses) differs in essence from its effects on production of instruments with few or no moving parts. Ontological distinctions exist between industrial and craft processes, and between mass-produced and hand-made instruments; these different kinds of "being" rouse different attitudes in people. Further analytical problems are posed by multipurpose electronic devices that have music-making as only one of their functions, and by prehistoric sound-producing implements that can be undistinguishable from other artifacts or found objects not used intentionally to make sounds. These issues indicate some directions for future conversation.

Some questions of materiality are still being studied by insightful but down-to-earth approaches. One example is Myles Jackson's examination of the intersection of musical, scientific, calculating, and measuring instruments in nineteenth-century Germany, and their relation to music

150. See Sean Murray, "Pianos, Ivory, and Empire," *American Music Review* 38/2 (spring 2009): 1, 4–5, 13–14. While going out on a metaphorical limb by asserting that objects have social lives, a dubious tenet of material culture studies, Murray sensibly states, "Of course pianos and ivory do not have agency or sociality in the same way that people do, but musical instruments shape their players in deep and subtle ways, and attending to the relationship of pianos and their players sheds light on the subjective experience of musicians" (p. 1).

151. Ruth Schwartz Cowan, A Social History of American Technology (New York and Oxford: Oxford University Press, 1997).

pedagogy and practice.¹⁵² Musical instruments as therapeutic devices, an important theme explored for medieval keyboards by Standley Howell, calls out for further investigation.¹⁵³ Malevolent aspects of instruments, including real hazards they pose to makers and players, also deserve study, and I am curious to see how ANT copes with these. Organology's overlap with science and technology studies is not a new topic; Edmund Bowles was exploring interchanges between instrument making and other technologies half a century ago.¹⁵⁴

Omens of Gloom, or of Transformative Growth?

Rossi Rognoni's essay offers a cautious if not pessimistic assessment of organology's position vis-à-vis his "others," warning of issues (e.g., hyperspecialization, shrinking number of university courses and curatorial positions, misunderstanding of the discipline's content, failure to communicate effectively) that threaten to undermine its status and identity. This outlook is somewhat surprising, considering the well-funded redevelopment of collections under way at the Royal College of Music, Rossi Rognoni's employer. Or, for example, the recent renovation and reinstallation of St. Cecilia's Hall in Edinburgh, where Rossi Rognoni's panel assembled. Even the Victoria & Albert Museum's controversial redeployment of its instrument collection has had benefits, allowing wider exposure through loans and partial dispersal within the museum. No such projects are faultless, but that they take place at all gives cause for optimism. If institutional support has not been forthcoming elsewhere, the problem possibly lies not with organology but with a lack of persuasive advocacy. In a competitive environment, decision-makers have not been convinced of the instruments' importance to their institutions' constituencies-the issue is essentially political.

From a curatorial perspective, organology's prospects look bright. Internationally, new museums of music are proliferating; instruments, if not the main focus, often occupy contextual showcases and appear in

154. For example, Edmund A. Bowles, "On the Origin of the Keyboard Mechanism in the Late Middle Ages," *Technology and Culture* 7/2 (Spring 1966): 152–62, and subsequent work on the development of mechanized timpani. Bowles is an AMIS member and former IBM executive.

^{152.} Myles W. Jackson, Harmonious Triads: Physicists, Musicians, and Instrument Makers in Nineteenth-Century Germany (Cambridge, Mass., and London, MIT Press, 2006).

^{153.} Standley Howell, "Medical Astrologers and the Invention of Stringed Keyboard Instruments," *Journal of Musicological Research* 10/1–2 (1990): 1–17.

public programming. Recognizing this expansion, ICOM's International Committee of Museums and Collections of Musical Instruments was officially renamed in 2017 as the International Committee for Museums and Collections of Instruments and Music (Comité international pour les musées et collections d'instruments et de musique, still known by its French acronym CIMCIM), of which Rossi Rognoni is currently president.

Just as new museums of music are opening, well-established art and technology museums are reconceiving old, didactic instrument exhibits to attract younger, more diverse visitors. Historic sites, too, are paying more attention to musical instruments in their care, thanks in part to outreach efforts such as Darcy Kuronen's survey of instruments scattered among historical societies in New England. Elsewhere, too, strenuous efforts are under way to document and preserve historic instruments outside museums' purview, for example by the privately funded Instituto de Órganos Históricos de Oaxaca, which catalogs old church organs in the Mexican state of Oaxaca. All such endeavors offer ways for organologists to connect with the public.

Impetus for these developments comes from many directions, among them audience enthusiasm for early music and world music (evident from YouTube viewing numbers); publicity surrounding sales of extraordinary instruments from fine violins to celebrities' guitars; cultural tourism; national and regional pride; historic preservation and interpretation in general and especially of folkways; increasing awareness of the importance of music in human development; and increasing democratization of music-making and learning through digital devices, which enable more people to engage actively with music and thus feed curiosity about its means. Reflecting this interest, musical instruments and instrument-making frequently figure as subjects for literature and cinema, generating a mystique that also drives curiosity.¹⁵⁵

155. Examples include John Marchese's sympathetic study, The Violin Maker: Finding a Centuris-old Tradition in a Brooklyn Workshop (2007); Thad Carhart's best-selling memoir, The Piano Shop on the Left Bank: Discovering a Forgotten Passion in a Paris Atelier (2001); Annie Proulx's novel, Accordion Crimes (2003); and Don McKellar and François Girard's award-winning film, The Red Violin (1998). The social critic Matthew B. Crawford's The World Beyond Your Head: on Becoming an Individual in an Age of Distraction (2015) devotes a chapter to the philosophy and practices of Taylor & Boody Organbuilders in Staunton, Virginia. Anita T. Sullivan's book on the philosophy of piano tuning, The Seventh Dragon: The Riddle of Equal Temperament (1986, 2nd ed., 2005), won the Western States Book Award. Along with these developments, public access to organological information is rapidly improving, thanks to digitization of catalogs, books, and articles. In online databases, photo galleries and audio samples partly offset the recent consignment to storage of so many instruments formerly shown in exhaustive museum exhibits seen only by visitors.¹⁵⁶

This expansion of resources does not negate Rossi Rognoni's worry that organology as an academic topic is being squeezed by inroads from more promising subjects, such as music cognition. Disappointingly, the call for papers to McGill University's "Timbre 2018" conference (Schulich School of Music, 5-7 July 2018) invited contributions from composition, music analysis, music theory, musicology, ethnomusicology, popular music studies, music psychology, musical acoustics, room acoustics, computer-aided orchestration, computer science, digital humanities, sound recording, and auditory cognitive neuroscience, but overlooked organology as such. Few leading music schools, such as the Schola Cantorum Basiliensis, regularly offer organology courses, and these are sometimes limited to European topics. But while the title "Organology" (or non-English equivalents) does not appear in many university course listings, its subject matter often arises in classes on orchestration, performance practice, music history, and specific repertoire, including non-Western musics. And organology figures prominently in acoustics and instrumentation symposia such as the Third Vienna Talk on Music Acoustics, hosted by the Institute of Musical Acoustics (Wiener Klangstil), 16-19 September 2015, and Instruments, Instrumentalité et Lutherie at the University of Strasbourg, 11 March 2016.

However, organology, or for that matter orchestration, can hardly be taught effectively beyond an introductory level without representative instruments available for study, hence the urgency for AMIS and CIMCIM to address collection development and management in colleges and universities. Efforts to encourage organological research include the Society for Ethnomusicology's Klaus P. Wachsmann Prize, recognizing

156. Examples include MIMO (Musical Instrument Museums Online; www.mimo -international.com), MINIM (Musical Instruments Interface for Museums and Collections; http://minim.ac.uk), Clinkscale Online (http://earlypianos.org), the Organ Historical Society pipe organ database (https://pipeorgandatabase.org), and National Pipe Organ Register of the British Institute of Organ Studies (www.npor.org.uk), as well as individual museum catalogs and instrument auction catalogues. The University of South Dakota Archives has recently digitized thirty Lyon & Healy merchandise catalogs and thirteen violin treatises. advances in the field through publication of new data and use of innovative methods.

If educational offerings in organology are in fact diminishing (but how many were offered in, say, 1950?), such contraction should be seen as part of a general consolidation of resources in the humanities. This consolidation is due chiefly to three forces (at least in the United States): higher education itself is under attack from conservative politicians; employers' needs for a better-trained workforce are pushing STEM (science, technology, engineering, mathematics) education at the humanities' expense; and increasing student and faculty diversity motivates more course offerings in hitherto neglected or undeveloped areas, their cost being offset by fewer courses in traditional subjects. Harvard University's music department, for example, has curtailed its music history and theory requirements, instead offering undergraduates greater flexibility to study popular and non-Western musics. In any event, student demand for intensive organology courses is low and teaching expertise is limited. Few organologists emerge fully fledged from academic programs; museum internship or fieldwork (which can include apprenticeship in instrument making or conservation) is almost always necessary to prepare for a career.

Instruments, Venues, and Museums

It is refreshing to hear from Eric de Visscher about practical ways to enliven museums and their instrument collections. De Visscher—a composer, former music programming director and director of the Paris Musée de la musique, and now visiting professor at the Victoria & Albert Museum Research Institute—stresses the value to museum visitors of hearing and watching musical instruments in use, not only in live performance (limited by conservation imperatives) but by means of conventional audio-visual aids and newer interactive digital technologies that allow virtual hands-on experience.

De Visscher's recommendations for closer collaboration with partners such as tech firms and software developers perhaps do not sufficiently recognize progress already made along these lines, nor the cost and logistical constraints these efforts face. A cautionary note: I frequently see young visitors devoting more attention to their devices than to the actual objects on display, with the danger that they are being told what to experience, rather than discovering interesting features for themselves. During the short time visitors usually spend in front of a display, too much guidance is as likely to stifle curiosity as to arouse it. So it is crucial to involve sensitive educators in designing the content of audio-visual aids, as de Visscher would surely agree.

Little historical perspective emerges in de Visscher's short essay. Far from being a new frontier, the performative aspect of museum work with musical instruments goes back more than a century, at least in the United States. Music enlivened the Metropolitan Museum of Art in its initial gallery in the Dodworth Building, where until 1872 Allen Dodworth had operated a dance academy.¹⁵⁷ From 1918 to 1947 the Museum offered free concerts for visitors, occasionally using instruments from its collection. For Curt Sachs, who guided the Museum's collection in the late 1930s, restoring historical instruments, including the oldest extant Cristofori piano, for performance was a high priority (unfortunately, in light of the damage caused). In 1955, a television broadcast on the topic "Instruments of Bach's Orchestra" featured instruments from the Museum's collection. While such programs do not rise to the level of staged theatricality and public participation recommended by de Visscher, they show a long-standing concern for enhancing visitors' experience by involving ears as well as eyes. After all, the Metropolitan Museum was explicitly chartered as a venue for recreation as well as instruction.

Finally, I am pleased to read of Flora Dennis's locating of Renaissance instruments, both real and depicted, in their contemporary "material environments" of architecture, interior furnishings, and decorative art in various media. Learning how people of earlier times saw musical instruments and integrated their visions with their surroundings helps us understand earlier attitudes toward music (tactile, aural, and other sensory perception is missing from Dennis's account, however). Trained in both musicology and art history, Dennis follows a path well-trodden by Peter Thornton, former Keeper of the Department of Furniture and Woodwork at the Victoria & Albert Museum, and by other historians of interior design, decorative art, and music iconography. Thornton's work, and particularly his support for Raymond Russell's and Anthony Baines's cataloguing of the V&A's instruments, inspired further research in such

^{157.} Dodworth, also a famous band director, is credited with introducing over-the-shoulder brass instruments.

specialized areas as harpsichord decoration and the importance of craft guilds. 158

One area deserving more attention from the standpoint of material culture is the effect of instruments' physical forms and surroundings on human behavior, including players' techniques and listeners' conduct. A church organ evokes decorum by virtue of its location in a hushed liturgical space. Like an organ, a piano in concert normally requires its player to remain seated and its audience to gather indoors but not too close, whereas a guitar or harmonica is perfectly at home in an intimate group around a campfire. A desire for symmetry in Victorian square pianos caused their pedals to be centered although the keyboard necessarily is offset to the left, at some inconvenience to the pianist. Calling such factors "active agency" on the instruments' part hardly advances our understanding of them; Dennis rightly attributes that quality to culture, that is, to people, not to inanimate things.

Dennis's contextual approach has been practiced for generations in museums of all types. But her paper shows once again how collaboration between organologists and specialists in other fields can advance appreciation of musical instruments in all their settings. It doesn't much matter what our field is called or where its boundary lines are drawn; what is important is the quality of insight that results from musical instrument research in its entirety.

158. Thornton's brief but admirable Musical Instruments as Works of Art (London: Her Majesty's Stationery Office, 1968) relied on the work of Russell and Baines.