As an ethnomusicologist I’m interested in the process and practice of ethnography, or the act of making notes about culture. I study musical systems since they can, in part, tell us the story of society and culture, in addition to being of interest in their own right. If we accept that humanistic research is involved fundamentally with story-telling, then the logical starting question becomes: what stories do we wish to tell? Then, what is the place of physical matter, and especially of musical instruments, within the narratives? Is the instrument simply one object of many, or rather can it at times be the subject of research? How do the musical instrumental characters in our story relate with the other characters, both human and non-human? How are we, as scholars, transformed and affected by instruments? Extending this, what can instruments tell us about culture and society, how reliable are they as story-tellers, and precisely how do they do this telling?

From 2004-2017, I was engaged with an extensive research project focused on the recording studio cultures of Istanbul, and one key topic within that project concerned the role and performance of Anatolian folk instruments within recording studio contexts, particularly changes in performance practice that happened due to the reliance on digital technologies (Bates 2016). Musical instruments figure quite prominently in this project, as certain Anatolian instruments are so powerful as to serve as national instruments, which by proxy suggests that they have the power to unite a nation around them (Bates 2012a). Other instruments are constitutive of regional, ethnic, and local identities. My work departs from much scholarship that would consider these effects as merely symbolic, and also from scholarship where the instrument is disengaged from social life/social lives. I contend that if we take seriously the ways people actually engage with instrument-objects, we must grapple with the messiness of these encounters, which include countless experiences where people regard their instruments as instruments of power, as influencing their owners for good and for evil, and as producing moral and ethical effects in both performers and listeners. Notably, I also discovered that rather than becoming disenchanted as we move in and beyond the postmodern present, instruments are finding new ways of enchanting people, and this happens even in the digital recording studios I study where dozens of Anatolian folk instruments are routinely brought in to perform the repertoires that come to constitute multiple forms of ethnic and national identity. Actor-network theory (or ANT for short) is one approach that contains significant potential for organology, although with caveats. At its most basic, actor-network theory is a methodological standpoint that assumes an analytical equivalence between humans and non-humans. Anything can be an actor, anything can be acted upon, and networks are (typically temporary) structures that hold together these actors and recipients. Since anything can be an actor, ANT has been termed a “flat ontology,” or in other words a nonhierarchical ordering of things. ANT has also been termed a material semiotics, and according to John Law “takes the semiotic insight, that of the relationality of entities, the notion that they are produced in relations, and applies this ruthlessly to all materials— and not simply to those that are linguistic” (1999: 4). Since organology as a discipline is at its core concerned about the interface between people and material objects, whether those people are the makers or collectors or rather prominent end-users, it is an ideal candidate for actor-network-type analyses.

Bruno Latour, perhaps more than any individual associated with the methodology, used ANT to study the practice and doing of science. While conducting ethnographic research at the Salk Institute, a biological research lab in San Diego, California, Latour, along with his colleague Steve Woolgar, was struck by the primary importance accorded to reams of printed out data resulting from experiments, and gave accounts of scientists laboring away and wholly at the whim of their medical instruments and computer printers – what he termed “inscription devices” (Latour and Woolgar 1986). For Latour, while there still is a cognitive and theoretical aspect of science, the reality of science is much more blatantly characterized by these mundane and repetitive encounters between people and technologies. And when he analyzed these encounters, it was the machines that appeared to be in control that possessed agency; people were subject to the whims and ways of the machines, enslaved to them even. The networks supporting science, accordingly, consisted not just of scientists, but included all the support staff (from janitors to doormen to executives) and notably the machines as well, and all the reams of data and conceptual apparatuses of science. Science happened as a network effect; Latour’s goal was to provide an account of science in action. We must clarify here that an actor-network is a fairly open-ended concept. Latour defines it as “a series of associations revealed thanks to a
ANT, in its most basic form, doesn’t have any particular explanatory power, but the methodology was developed alongside a number of interrelated concepts, some of which need to be included for an analysis to be truly indicative of ANT. One central concept is that of translation, later partly replaced with the term mediation. Translation has been defined differently through time, but one of the more streamlined definitions put forward by John Law was “the process or the work of making two things that are not the same, equivalent” (Law 1999: 8). For Latour and for other science studies scholars, it’s not just the practice of science which is in question, but what happens between discovery and real-world application. Science has to be communicated with the world, and communicated to other scientists, too; even the most significant scientific study is meaningless if it fails to circulate and produce change, whether that change is within the domain of science or in the outside world. Or in the language of Latour, there is a translation (1987: 108) that happens between the world of science and the world of policy, and there are key stakeholders who enact or perform this translation. As part of the translation process, certain actors enroll other actors (human and nonhuman) to their cause. So again, we’re encountering a linguistic metaphor (translation) that’s being applied to people, material objects, and concepts alike.

The translation concept is particularly useful when considering the invention and marketing of new kinds of musical instruments. For example, Trevor Pinch and Frank Trocco (2002) wrote an excellent book on the making of the Moog synthesizer which is concerned with the primary question: what factors are necessary for a whole new category of instrument to be invented and adopted?1 As they note, most earlier experiments with synthesis did not result in stable instruments that became widely adopted, most resided at the experimental stage. Certain factors were essential for enabling the synthesizer to become an instrument rather than just another experimental object, and here we need to understand the role of many kinds of actors, including marketers, distributors and expert users in translating between the worlds of electronics and lab equipment and the world of musicians in the genres of psychedelic rock, sound design, and popular dance music. By asserting that material objects can serve as actors and possess power, this implies that non-humans can therefore have agency. The other principal founder of ANT, Michel Callon, who was first a sociologist of science and later a sociologist of global economic systems, introduced to ANT the concept of agencement (Callon 2008, Styhre 2011: 40). I keep the term in the French since there isn’t a single English-language equivalent that captures its entirety. It’s a deliberate play on words, drawing on the original meaning of agencement as an assemblage of heterogeneous objects or a layout of concepts (originating in Deleuze and Guattari), but also creating a verbal noun out of the concept of agency. The second meaning could be given the neologism agencing, or the process of having or enacting agency, but we don’t want to lose the concept of assemblage, since Callon specifically wanted to draw attention to how agency works amongst heterogeneous collections of human and nonhuman objects. This dual meaning led to other agency-focused concepts. Notably, for our purposes, Andrew Pickering wrote in a compelling manner about the “dance of agency” that happens in science and sociotechnical systems (1995: 21-22). Translating this to the world of organology, it’s not sufficient (or particularly helpful) just to say that instruments have agency; we have to understand how people interacting with instruments are in a continuous and ever-shifting process of give and-take, ceding control to the instruments, seizing control from them. And it bears repeating that agency, in this conceptualization, is not to be confused with intentionality: agency is simply a property of things that make a difference/change in a particular situation, rather than a result of conscious thought.

Actor-network theory’s supporting concepts also call into question the ontology of objects in a number of ways. Two which are of particular interest are the concept of the body multiple, and the concept of black boxes and the processes of punctualization/ depunctualization. In Annemarie Mol’s (2002) study of hospitals and medical practice, she discovered through ethnography that patients, surgeons, family members, anesthesiologists and other actors all had differing conceptualizations of and relations to the sick patient’s body, which led her to think of bodies as multiples rather than as singular intact entities. John Law was especially interested in the processes whereby complex things are punctualized, or treated as intact entities that function as black boxes (1992: 384-6). Depunctualization is the process of blowing open the black box to reveal a complex actor network contained within. Both of these related concepts could be of particular interest to organologists, especially when considering the repair of instruments. Makers and instrument repair specialists have a different conceptualization of a working instrument than instrumentallists or listeners or other actors. There is a tendency to regard instruments as intact entities, when in reality they are often constructed of numerous parts; only the maker is normally aware of how these parts cohere into

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1 Pinch and Trocco are not ANT scholars per se, but pursue similar questions through related theoretical frameworks, notably the Social Construction of Technology (SCOT). However, the ANT concept of translation is similar to the idea Pinch and Trocco employ of the boundary object, albeit restricted to people and technological objects.
an illusory whole. But when deciding how and why to repair an instrument, a process of depunctualization happens. Choices are made, materials are leveraged, and out of the process a new instrument emerges that somehow shares an identity with the pre-repaired instrument even as it now contains new matter that wasn’t there before.

If one reads normative accounts of technological invention or development one gets the false sense that technology begins with a clearly formed idea, progresses into a working prototype, and is quickly and smoothly adopted in the world. But as organologists, we know that the invention and adoption of instruments is far from a neat or smooth operation; by far most instruments fail, and some that succeed take hundreds of years to do so; take for example the piano, which took over 100 years to develop into a stable form, in a process that was dependent upon the industrialization of piano manufacturing, the global distribution of raw materials, parts outsourcing, patent law, the expansion of the sheet music market, and the cultivation of an upper middle class demand for high art. What makes ANT compelling is the mandate to preserve what is termed the messiness of technology. Rather than distilling things down into a sanitized account, the mess is front and center. The sociologist John Law is perhaps best known for arguing this principle (Law 2004); he developed a whole research methodology around mess. Therefore, the actor network is the conceptual opposite of the sociological social network diagram that attempts to account for the entire structure of a social network and treats it as a fixed, unchanging, and above all simple entity. Reiterating a common actor-network dictum, “it could have been otherwise.”

Actor-network theory has taken hold and transformed many fields of study as diverse as global informatics, technological innovation, management and organization science, and art history. It led to the emergence of a whole new branch of philosophy known as speculative realism (Harman 2014). It’s been slower to be adopted in the study of music, although I will discuss a few notable exceptions. Nick Prior found that theorizing cultural production in contemporary music solely through a Bourdieuan reading was unable to account for the significant role of technology and suggested the application of ANT to show “how the technical and the social are inextricably linked” (2008: 315). Of the technologies in question, it’s notable that it’s specifically musical instruments (e.g. drum machines, samplers and keyboard) for Prior that posed the challenge to Bourdieu and demanded a suitable alternative methodology and theory. Contemporaneously, in my dissertation I drew on actor-network theory to understand the relation between the human-social networks of Istanbul’s recorded music industry and the acoustic instruments, electrical and digital technologies and architectures that were essential for record production (Bates 2008).

One scholar who has become especially associated with actor-network approaches is Benjamin Piekut, a historian of experimental music in the US and UK. In the spirit of Latour, who more than any concept has been attracted to key debates in the history of science and technology, Piekut (2011) examines key debates/crises within the 1960s history of experimental music in New York City. The materials of his actor networks include scores, electronic and acoustic musical instruments, “music,” magazines and criticism, and a host of different human actors that came to ascribe meaning to the outer reaches of downtown experimental music practice. Following up on this book, Piekut (2014) wrote the only dedicated article that specifically suggests how music studies could be improved through the application of ANT, although its ambitus is mainly restricted to historical musicology rather than other music studies fields. In particular, he takes four useful concepts out of ANT: agency, action, ontology, and performance. He then applies these selectively to three areas he believes are of central importance to music historians: influence, genre, and context.

In my article on the social life of musical instruments (Bates 2012a), I follow numerous narratives and stories about the saz, a Turkish instrument. While my work begins with an actor-network methodology, I found the “flat ontology” of actor-network theory to be problematic. In particular, I was puzzled by the asymmetrical representation and position of different instruments. The saz in particular has long been viewed as possessing a considerable degree of agency, and we can see this in the lyrics to many old folksongs that are part of the national folksong canon, but other folk instruments do not appear to have as much agency, or have agency of a different kind perhaps. The saz, therefore, is an especially charged position within networks, and again, this is not surprising considering it is the de facto national instrument of Turkey. I therefore chose to supplement an actor-network approach with a vital materialist approach, specifically Jane Bennett’s concept of vibrant matter (2010), to understand why and how saz instruments continue to enchant makers, musicians and audiences.

I’ve treated ANT as a singular entity until now, but as the methodology spreads it has spawned numerous derivative frameworks, especially in the domain of speculative realist philosophy. Allen Roda (2014) goes beyond Latour and the science studies camp of ANT to draw upon Graham Harman’s concept of an object-oriented ontology (2002) and Levi Bryant’s concept of a democracy of objects (2011), applying these to rethink what Indian tabla drums are and how they are made. Richly ethnographic, Roda privileges the visceral and material detail of the tabla-making experience. As he argues, the tabla drum makers of India need to be considered in relation to weather and climate change, to shipping regulations and nation-specific customs procedures, and in relation to changing economic models.
that support the instrument industry (Roda 2015). The concept of jugāḍ karnā, or “making do,” illustrates the ways instrument makers respond to variations in the materials that make up drums, and improvise solutions when problematic materials arise. Therefore, tabla-making emerges as a complex network effect, one with many actors and many uncertainties.

Another ANT-inspired approach concerning instruments is Andrew McGraw’s study of gamelan as a “comingling of things-sounds-bodies” (2016: 135), a property shared both in traditional Balinese gamelan and in robotic gamelatron performances. Strikingly, he found that for non-specialist audiences robotic and human-played gamelans were both capable of producing “atmospheres of intensely felt relation, albeit in divergent and unique modes” (2016: 126). McGraw goes beyond ANT to incorporate process philosophy to understand the concept and experience of atmosphere, bringing a “deeply ecological” (ibid.: 130) perspective to bear. Insofar as he adopts a “radical empiricism” perspective on analyzing instrumental performance, his work is compatible with ANT approaches. But his phenomenological attention on the human experience – not just the experience of the audience but the experience of gamelan makers, too – lies outside a normal ANT analysis.

These last three articles suggest some of the limits of ANT, and how it can productively be leveraged in tandem with other methods and extended through other theories. In addition to the problems that ANT has when accounting for ecological and affective dimensions (ANT is not especially attuned to phenomenological questions and to the nuances of human feeling), ANT also suffers from an inability to address temporality (Piekut 2014: 206). Actor-networks tend to be conceptualized as static snapshots rather than as object-relations in motion. For example, when trying to theorize the experience of studio work in Turkey, and in particular the complex role of acoustic, folk instruments within studio assemblages, while ANT was useful to document certain continuous or static aspects such as the effects of studio architecture on studio inhabitants (Bates 2012b), it wasn’t useful for documenting the temporal unfolding of instrumental performance or audio engineering labour; for that, approaches from cognitive psychology were needed (Bates 2016). ANT has been continuously critiqued by its founders over the years. Law noted in 1999 that “we have lost the capacity to apprehend complexity” (1999: 8), a striking admission considering that ANT was designed in part to provide analyses of complex, heterogeneous networks.

But where ANT is most valuable is in opening up new lines of inquiry, in serving as a mandate for a better empirical research design – one that takes account of translation, agency, mess, and productively approaches depunctualization. Used effectively, ANT could help us tell more varied and nuanced stories about the relations between musical instruments and society.

Bibliography


