Improvising Technology, Constructing Virtuosity*

IMPROVISACIÓN DE LA TECNOLOGÍA Y CONSTRUCCIÓN DEL VIRTUOSISMO

IMPROVISAÇÃO DA TECNOLOGIA E CONSTRUÇÃO DO VIRTUOSISMO

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* Research paper. This research paper is part of a larger, ethnographic project examining contemporary musicians who improvise with new, repurposed, and reinvented electronic technologies.

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Abstract

In this paper, I explore how contemporary musicians using electronic technologies in improvised music conceptualize skill and virtuosity in their musical practices. This includes ideas about the role and agency of technology, learned and repeatable physical skill, skill acquisition, skill transmission, and the projection of learned skill from traditional instruments onto new instruments. The musicians' use of idiosyncratic and individually constructed instruments—instruments with little or no history of a performance practice—makes this field a rich resource to examine how such conceptions are developed. Among the musicians I interviewed, the relationship between physical skill and virtuosity is particularly contested. While they frequently value such skill, they also connect it to perceived excesses of certain factions within Western art music, jazz, and other established musical performance practices where physical skill can be conflated with (or considered as the primary element of) musical skill, writ large. This perception of the excess and the prioritization of physical skill have led some interviewed musicians to adopt antivirtuosity as a reactive counter-ideology or to explore the less tangible concepts of hearing, creativity, imagination, memory, novelty, innovation, and even ideas of management as constitutive of musical virtuosity and skill. This paper is part of a larger ethnographic examination of a diverse cross-section of contemporary musicians who improvise with new, repurposed, and reinvented electronic technologies, including Robert Henke (one of the original authors of the software package Ableton Live), guitarist Nels Cline (Wilco), composer and flute player Anne La Berge, and trumpeter/composer Wadada Leo Smith.

Keywords: Virtuosity, improvisation, music, technology.

Resumen

En este artículo exploro cómo los músicos contemporáneos que utilizan las tecnologías electrónicas en la música improvisada conceptualizan la habilidad y el virtuosismo en sus prácticas musicales. Esto incluye ideas sobre el papel y la función de la tecnología, las habilidades físicas aprendidas y repetibles, la adquisición de habilidades, la transmisión de habilidades y la proyección de la habilidad aprendida de los instrumentos tradicionales a nuevos instrumentos. El uso de instrumentos idiosincrásicos e individualmente construidos—instrumentos con poca o ninguna historia de una práctica de interpretación—por parte de los músicos hace de este campo un recurso rico para analizar cómo se desarrollan estos tipos de concepciones. Entre los músicos que entrevisté, la relación entre la habilidad física y el virtuosismo es particularmente controvertida. Si bien frecuentemente valoran dicha habilidad, también la relacionan con los excesos percibidos de ciertas facciones dentro de la música occidental, el jazz y otras prácticas establecidas de interpretación musical en las que la habilidad física se considera combinada con (o considerada el elemento primario de) la habilidad musical escrita a gran escala. Esta percepción del exceso y la priorización de la habilidad física ha llevado a algunos de los músicos entrevistados a adoptar la antivirtuosidad como una contra-ideología reactiva o a explorar los conceptos menos tangibles de audición, creatividad, imaginación, memoria, novedad, innovación e incluso ideas de la gestión como constitutiva de virtuosismo musical y habilidad. Este artículo hace parte de un examen etnográfico más amplio de una muestra representativa diversa de músicos contemporáneos que improvisan con tecnologías electrónicas nuevas, reutilizadas y reinventadas, incluyendo Robert Henke (uno de los autores originales del paquete de software Ableton Live, inmensamente popular), el guitarrista Nels Cline (Wilco, Yoko Ono, entre otros), la compositora y flautista Anne La Berge, y el trompetista y compositor Wadada Leo Smith.

Palabras clave: Virtuosismo, improvisación, música, tecnología.

Resumo

Neste artigo exploro a maneira como os músicos contemporâneos que utilizam as tecnologias eletrônicas na música improvisada conceituam a habilidade e o virtuosismo em suas práticas musicais. Isto inclui ideias sobre o papel e a função da tecnologia, as habilidades físicas aprendidas e repetíveis, a aquisição de habilidades, a transmissão de habilidades e a projeção da habilidade aprendida dos instrumentos tradicionais a novos instrumentos. O uso de instrumentos idiossincrásicos e individualmente construídos—instrumentos com pouca ou nenhuma história de uma prática de interpretação—por parte dos músicos faz deste campo um recurso rico para analisar como se desenvolvem estes tipos de concepções. Entre os músicos que entrevistei, a relação entre a habilidade física e o virtuosismo é particularmente controvertida. Apesar de que frequentemente valorizam esta habilidade, também a relacionam com os excessos percebidos de certas facções dentro da música ocidental, o jazz e outras práticas estabelecidas de interpretação musical onde a habilidade física se considera combinada com (ou considerada o elemento primário da) habilidade musical escrita a grande escala. Esta percepção do excesso e a priorização da habilidade física fizeram com que alguns dos músicos entrevistados adotassem a anti-virtuosidade como uma contra ideologia reativa ou explorassem os conceitos menos tangíveis de audição, criatividade, imaginação, memória, novidade, inovação e inclusive ideias da gestão como constitutiva de virtuosismo musical e habilidade. Este artigo faz parte de um exame etnográfico mais amplo de uma amostra representativa diversa de músicos contemporâneos que improvisam com tecnologias eletrônicas novas, reutilizadas e reinventadas, incluindo Robert Henke (um dos autores originais do pacote de software Ableton Live, imensamente popular), o guitarrista Nels Cline (Wilco, Yoko Ono, entre outros), a compositora e flautista Anne La Berge, e o trompetista e compositor Wadada Leo Smith.

Palavras chave: Virtuosismo, improvisação, música, tecnologia.

This paper is part of a larger ethnographic project examining contemporary musicians who improvise with new, repurposed and reinvented electronic technologies, including, among others: guitarist Nels Cline, turntablist Maria Chavez, trumpeter and composer Wadada Leo Smith, and Robert Henke, one of the original authors of the immensely popular software package Ableton Live. In the larger work, I examine changing notions of agency, instruments and virtuosity in electro-acoustic improvised music (EAIM), and how the interviewees construct what is valuable and desirable in this emergent practice. In addition to documenting how these creative individuals configure technologies for their own purposes, I highlight how technologies can also configure musicians and musical communities by affording specific ways of creating aesthetic and social value. Musical cultures and communities across time and place are frequently differentiated by geography, by the instruments used, by notions of style or repertoire, and by musical function and venues, among other things. In EAIM, I argue, many of these differentiating elements are blurred, as the music is transnational in emergence and practice, instruments are frequently idiosyncratic, and improvisation[1] arguably de-centers repertoire ("arguably" because non-idiomatic and other forms of improvisation can be viewed as a style, or even possibly as a repertoire of musical gestures). Because of this blurring, the EAIM community offers a unique window into how musicians conceptualize their practice and relationship with music technology.

The interviews and observations began when I was in residency at STEIM laboratories (STudio for Electro-Instrumental Music) in Amsterdam in 2010, were developed during two extensive stays in Berlin, at home in the United States, and continue today. At STEIM, there was a constant flow of international artists in residence who work in EAIM, making it a great location to begin collecting interviews of musicians. All artists were asked the same set of ten initial questions:

1. Please describe what you do. Can you describe your sound?
2. Why do you work in electro-acoustic improvised music? What is compelling about the medium?
3. How does your music differ from what others in the field do? Who do you view as similar?
4. Is your music driven by a specific aesthetic?
5. What tools[2] and instruments are used? Can you please describe your physical relationship to your tools/instruments? Are you passionate about a tool or specific technological platform? Why? Do your tools influence the way you play?
6. What other artists do you work with? What type of instruments do other members of their ensembles use? What are the sizes of ensembles?
7. Where do you live? How does the environment affect and inform your music?
8. What venues/locations do you perform at? Who is your audience?
9. What is driving the creation of the music? Artists, audience, technologists, tools, reception, industry?
10. What are the conceptions of skill in EAIM? What musicians do you think exemplify this skill and why? How does one gain such skills?

These initial questions led to further questions: from examining the role of race and gender identity, to discussions of semiotics and sound-metaphor. Throughout the interviews, I pursued the core questions, but there were four particular areas of examination that artists seemed to find the most compelling: describing their work, discussing what they find

compelling about the medium, explaining their relationship with tools, and articulating their conceptions of skill alongside ideas of virtuosity (i.e., special or exemplary skill). It is the last question about skill and virtuosity that I will be focusing on in this paper, particularly on the role that interaction with technology plays in constructing ideas of skill and the move to valuing conceptual skills as a reaction to certain traditions where physical skills are perceived by many interviewees as over-emphasized.

Performer/technologist Joel Ryan, a professor at the Institute of Sonology in Den Haag who has performed extensively with Evan Parker's Electro-Acoustic Ensemble, told me in his interview that electronic music came into the world "without a performance practice" (Ryan 2010). EAIM has appeared recently so that interviewing contemporary musicians about the technical and conceptual details of their practice presents us with the opportunity to observe the development of these practices as they emerge. Since these individuals frequently create single, unique instruments that only they perform with, they also create their own unique corresponding performance practice. As musician/technologist Gregory Taylor told me about his instrument, "I'm the only one that plays it, knows it. I'm the only person who has it. Therefore, I'm a virtuoso on it" (Taylor 2010).

The innovative use and design of new instruments and tools is a part of the culture of electronic music. This focus on constructing the new is seen by some of the interviewees as liberating from the history of traditional instruments and all that tradition entails, namely performance practices, timbral expectations, and pedagogical traditions. At the same time, performers and creators using these new technologies are not able to escape the collaborative force of the object. That is, the instrument itself acts as a collaborator in the development of a new performance practice by either restraining certain behaviors or urging and encouraging others.

However, the role of technology was a point of contention and difference with many of those interviewed, from Nels Cline's (2011) assertion of his agency over the technology,

> I like to think that the technology is not driving me, I like to think that I'm trying to emulate sounds I've heard in recordings, in concerts, even in my dreams, in my head…those sounds are me deciding what's going to come out of the speakers. Those effects didn't tell me to do that, I made them do that by turning them on in a certain way, a certain sequence, certain parameters all at the same time, excluding others that would be extraneous and would somehow diminish my sonic mayhem.

to Wadada Leo Smith's (2012) assertion of the agency of the technology in discussing the wah-wah pedal:

> All these things are alive, they just have different kind of ways of expressing it. They are alive, the moment you touch it your senses tell you that you have made a connection. And it knows you've made a connection because whatever you do, it responds to you. So, what is that, except a living organic connection.

Even the company that makes the popular electronic music programming environment, Max/MSP (@cycling74), commented on agency in a Twitter post on November 16, 2012, saying, "#maxisnot telling you what you make." In certain circles, there still remains concern over the agency of technology and the supplantation of human primacy in music making.

Regardless, the construction of tools constructs possibilities of practice. These possibilities or opportunities for musical action can be referred to as "affordances." Subverting original intentions reveals affordances that were masked by those very intentions. Exploration, then, becomes an element of virtuosity through the unmasking of possibilities.

The term *affordance* was developed by psychologist James J. Gibson but furthered by other theorists, including Paul Dourish (2001), who writes,

> Traditionally, affordances are features of the artifact… that afford particular sorts of action to appropriately equipped individuals… However, features of the design also afford particular ways of understanding it, and particular ways of conceptualizing the relationship between the artifact and the environment… (185)

While some affordances are apparent on the surface, others must be further conceptualized or discovered/unmasked in relationship and bodily interaction with the instrument. Paul Dourish (2001) presents a possible and helpful model for this, saying, "Embodied interaction is the creation, manipulation, and sharing of meaning through engaged interaction with artifacts" (126).

Interviewee and turntablist Ignaz Schick's (2010) music illustrates the feedback this "engaged interaction with artifacts" gives to the artist on the development of a performance practice as he deconstructs, dissects, and destroys turntables. While experimenting early on in his career, Schick accidentally disabled one of the most salient features of a modern phonograph/turntable: the means of electronic amplification. Consternation over the loss of the cartridge amplification system, combined with his own self-described lack of soldering skills, set him on the musical path he has been on for over twenty years. Suddenly, the turntable mat became a spinning source of friction to objects held stationary against the mats' rotation, the turntable mat began acting as a bow would on a string instrument, exciting vibrations that could be amplified. This accident, this unintentional act, could be attributed to randomness, to Schick as creative agent, to the turntable having agency, or to all three. But important to this is the affordance of the instrument itself. The practice was not developed or conceptualized by Schick alone, but came about as an engaged interaction between Schick and the object: the turntable was a force in the development (Schick 2010).

Schick and the instrument become partnered, creating a more complex environment, where the object pushes back on the artist, as the artist pushes on the instrument; a relationship that is strongly characteristic of what literature and philosophy professor Mark B. N. Hansen calls "system-environment hybrids," which arise out of complexity:

> worldly (environmental) complexity has become so intense and so messy […] that any effort to reduce it through selection by systems (or their avatars) cannot ignore the agency that is wielded by the environment, and second, the operation of this environmental agency is now predominantly and ever increasingly technical, meaning that system function is irrevocably permeated by technicity from the environment. (Clarke and Hansen 2009, 113)

Through this complex interaction—including cyclical feedback between us and our "complex cultural and technological environments" as Andy Clark (2003), Chair of Logic and Metaphysics at Edinburgh University writes—meaning and understanding emerge. With Schick (2010) and other contemporary turntablists, the environment itself has become so

thick with objects that, as Hansen said about system-environment hybrids, you "cannot ignore the agency that is wielded by the environment" (Clarke and Hansen 2009, 113), including, of course, what "things" are in that environment. As Wayne Bowman (quoted in Bresler 2004) argues,

> mind extends beyond the physical body into the social and cultural environments that exert major influence on the body and shape all human experience…The boundary between "mind" and "world" is at once much more problematic and far more multi-faceted than cognitivist theory allow. (36–37)

Critically acclaimed and known among his peers for his "virtuoso" turntablist skills, dj sniff is insistent on being able to perform his own experimental music that he feels differs in dramatic ways from popular forms using the turntable, in particular, by eschewing the strong, regular beat associated with much dance music.

In dj sniff's hardware setup at the time of my interview, the crossfader would cut the signal from the turntable, sending it to the software (authored by dj sniff in Max/MSP) running on a Mac mini. The computer has no attached screen: for dj sniff, the focus must remain on the instrument (i.e., the turntable); for dj sniff, a screen would be a distraction, not only for the artist, but for the audience as well. The cutting action of the crossfader not only sends the audio to the computer, but also sends a corresponding message to the computer, asking it to record the audio and store it, and then to play either that recorded sample or another randomized sample that was recorded earlier. This technique of interface connects dj sniff's self-described "motoric skills" to the performance, helping his music to become "very physical and very gestural" (Lippit 2010). The concept of focusing on the physical performance is important to dj sniff and has developed out of observing other experimental performances involving a laptop, where it might appear that the physical involvement of the performer is on a par with browsing the Internet or checking one's email.

During his tenure as artistic director at STEIM, dj sniff met with artists-in-residence to discuss current and historical trends and developments regarding the creation of instruments. According to dj sniff, this almost always led to a discussion of ideas of virtuosity in performance: "Most people, including myself, think it is one of the central things of music making or of the performance of what we want to see." dj sniff is quick to dismiss ideas of virtuosity defined solely by "motoric skills." dj sniff says that some of the research group members would argue that the term is defined solely in such a way, and that is the reason many members of the group believed that virtuosity should be left out of the discussion. But dj sniff and others do not want to leave it behind; instead, they seek to redefine, reimagine, and remediate the term in a way that is relevant to EAIM and contemporary musical practice in general.

Interviewee Olivier di Placido (2010) said, "I think at one point every musician starts to have some virtuosity, some skills. Then you start to build your home." Being a virtuoso is always being a virtuoso in something, and at some place, in some time, with something. Virtuosity, with Placido, is being constructed as it is being developed. The tension in relationships in such a discourse—for example, between actors such as performers, critics, composers, and audiences with conflicting conceptions of skills, tradition, innovation, motoric ability, and notions of artistry—becomes as much a defining aspect as the skill itself, and the conflicting views a part of the reason virtuosity is so readily dismissed by certain

interviewees. As Yutaka Makino (2010), who has performed in the past with dj sniff, said, "I've never thought of virtuosity… for me, it is tied with the classical lineage… I try to be as discrete as possible. For me, that [questions of virtuosity in this music] doesn't make any sense."

One day in Amsterdam, I was sitting on a bench enjoying a particularly lovely fall day in the Spui and discussing the idea of virtuosity in this music with Michael Moore, a well-known clarinetist and saxophonist with the Dutch ensemble ICP. Moore would have nothing to do with the word *virtuosity*. Every time I said "virtuosity" he would vehemently dismiss it, as he feels the word is too poisoned by its past conflation with playing fast and overly dramatic displays of excess skill. Yet in terms of virtuosity, if defined as both technical ability and broader ideas of artistry, Moore is with few equals. This *anti-virtuosity* view was also stated by other interviewees. Further pursuit of this line of questioning surrounding ideas of virtuosity led to the importance of musical identity as the artist's conceptualization, articulation and expression of their artistic individuality as well as ideas of cultural, genre, community, and lineage affiliation they might share with others with whom they similarly identify. To be a virtuoso in the traditional sense, for many interviewees, was not to express one's own identity, but to be defined by somebody else's identity and the imposition of these identities on the performer. Some scholars of Western art music argue that it was at the time of the Romantic era in classical music that the idea of virtuosity changed to a focus on the ability to motorically present the specifics given by a composer, leading to the alienation of performers. For example, author Susan Bernstein (1998), writes that Wagner,

> conceives of execution primarily as adequate repetition…Because the compositional thought is the prior origin of the performance, execution is considered a relation of identical repetition, almost like that of the printing press to a manuscript… (85–87)

She continues, referring to the virtuoso as,

> the usurper of [the composer's] identity, the delegate of himself…an extension of the composer's pen…Ideally, the virtuoso would be a musical instrument, that, the kind of instrument that is thoroughly effaced in the presence of the ends it serves…The proper characteristic of the virtuoso is to have no proper characteristics… (Bernstein 1998, 85–87)

It is easy to see how a practice such as EAIM, dominated by idiosyncratic performers, instruments, and improvisers, might rebel against this conception of virtuosity, rejecting the loss of individuality, participation, and the expression of identity. However, many in EAIM eschew the entire dismissal of the term, and are more interested in redefining virtuosity. Robert Henke (2010) said,

> I came to this originally with the idea of the total liberation from virtuosity by electronics. The computer does everything that needs virtuosity, all you need is the brain. All you need to have is an idea. I no longer think this is true, because there is a strong connection between the ideas you have and the virtuosity you have with your instrument. The more you can play, the more you do play. I judge virtuosity very high, rehearsing and practicing very high. You can become good at moving a fader… I have this specific haptic connection with those faders… This is why people like certain hardware, they are skilled at using it in a certain way… If you want to perform in a convincing way you have to react and this implies that you know your tools.

In certain ideas about virtuosity,[3] there is a conceptual aspect, sometimes called "artistry," that is considered alongside skill/technique. This complex relationship between physical technique and conceptual ability has led to an examination of proportions: technique considered mostly devoid of artistry might be referred to as "empty virtuosity." Empty virtuosity, then, becomes a reductive, quantifiable value: i.e., if you do this, this, and this, you are a virtuoso. There is certainly a backlash against ideas of empty virtuosity among musicians working in diverse musical fields, including improvised musics. This backlash has led to many interviewees re-imagining virtuosity as more purely conceptual. Interviewees included the following in defining virtuosity: local (to the performer), listening, knowing, decision making, managing, exploring, imagination, and memory. dj sniff, for example, qualifies his ideas of skill and virtuosity as being more than—but including—motoric skill. He states,

> some people are strict as defining virtuosity just to motoric skills, [that] it's about physical movement and interaction on the spot, and not including for example listening or selecting. I'm not—I think there is a lot of skill to listening and knowing when and making decisions that are right. (Lippit 2010)

dj sniff equates virtuosity with a balance of conceptual and physical skill, but at the same time, in his own practice, he is also committed to and "very concerned with the traditional sense of virtuosity" that involves motoric skill in its conception, saying,

> I try to look at people like Evan Parker or Max Roach or that post-bebop generation that moved into the instrument and tried to define instruments as solo instruments. Those are my big inspirations: because I'm trying to do that with the turntable, and I'm trying to see what makes sense with today's technology in doing that. (Lippit 2010)

Many of the musicians interviewed wanted to direct the discussion of skills into the less concrete (and therefore less reducible) ideas, such as a virtuosity of imagination, or into realms of cross-domain understanding using metaphor and metonymy, such as "virtuosity of the ear." This dramatically changes the discussion of skill and virtuosity, moving it from specifically defined and transmittable techniques to conceptual skills that are more vague—generalized values that lose transmittable specificities. Some interviewed musicians see this shift as a democratizing force, that everybody has imagination, and that this music becomes something anyone can do. But along with the loss of specificities and increased vagueness can come a mystification—a metaphysics, if you will—of virtuosity, which can be problematic.

However problematic, within these less tangible ideas of virtuosity there remain possibilities of the construction, re-imagining, and remediation of the conceptualization and practice of skill and virtuosity in EAIM. I will end with a quote from flute player, improviser, technologist, and composer, interviewee Anne La Berge (2010), tying in with what dj sniff and others said earlier,

> There is a virtuosity in being quiet, in imagination, in memory, coupled with the technology… where I can discover another turn of sound or technique in either the machine or me or the flute. I would call virtuosity: fantasy, and memory to use it.

NOTES

1 For this paper, *improvisation* will be defined as a live interactive construction and ordering of sound where the players/actors are not only constructing and ordering, but are being informed and presented with possibilities as to how to proceed by that which is being interacted with, constructed, and ordered. This creates a feedback loop of possibilities where actors are both influenced and influencing, configured and configuring.

2 *Technology*, as defined in "straightforward" terms by author Debra Benita Shaw (2008), are "tools or 'techniques' that serve the requirement of any given culture" (1). In this paper the terms *tools*, *instruments* and *technology* will be used somewhat interchangeably.

3 I focus here on Western Art Music and virtuosity as I feel it is this tradition, as one of the discourses from which EAIM emerged, that the problems with conceptions of virtuosity stems for the interviewed musicians. There remain other valuable discussions on influences/ideas of skill and virtuosity from other musical practices.

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